XC Series XCP Pro Edit Tool

User Manual

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1. User explanation

This chapter focuses on XC XCP Pro PC software installation system requirements, installation and unloading steps.

1-1．Install system requirements

1-2．Install steps

1-3．Uninstall steps

1-1. System requirements：

This software is suitable for running on Windows 2000, Windows NT, Windows XP and others above.

1-2. Install steps

1, If your operation system has not installed the Framework 2.0 library before, you should run the installation process "dotnetfx.exe" first, which is in the subfolder "dotnetfx" of the installation folder;

2, Double-click to operate the installation files“setup.exe”.

① Click “Next”.

② Choose software

1-3. Uninstall steps

1, Choose "Start"→ "Setting"→ "Control panel"

2, Double-click "Add/Delete XCP edit tool"

3, Pick on "XCPPro3.0" in the list, press "Delete" in the lower right corner

4, Click [Yes] in the "Add or Remove Programs" screen

5, Uninstalling XCP Pro

6, Prompt the uninstall is successful.

2, Basic operation

This chapter focuses on the most basic operations in XCP Pro, including opening and closing the software, create and open the project, and add and delete PLC types in the same project.

2-1．Open and close the XCP Pro

2-2．Create and open the project

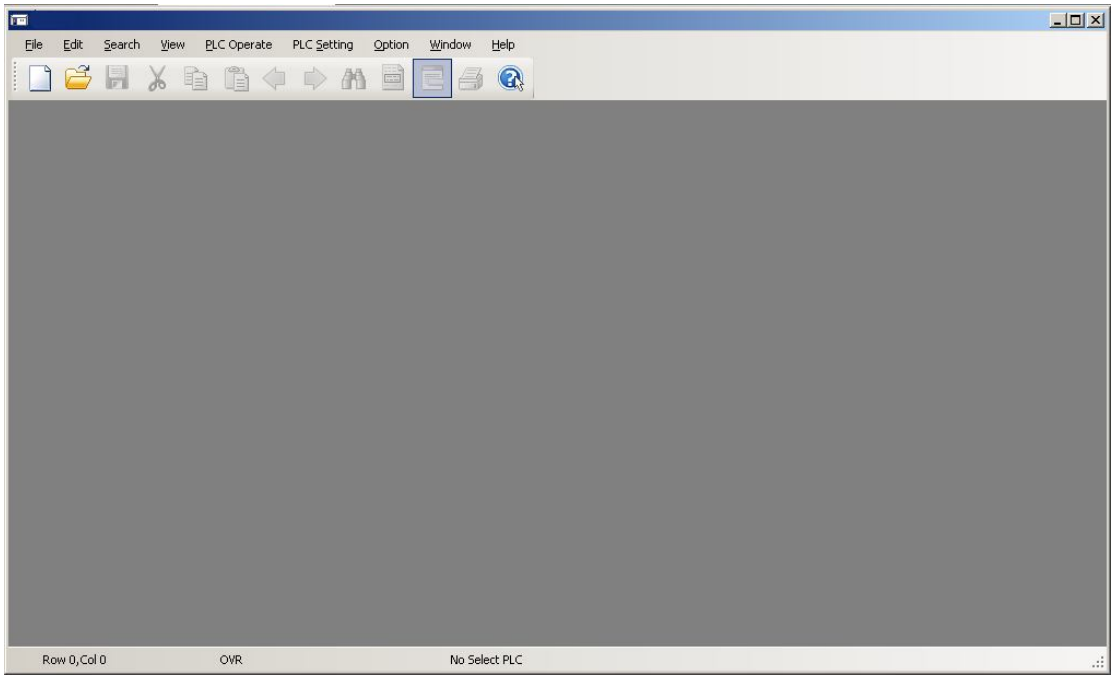
2-3．Add and delete PLC type

2-1. Open and close the XCP Pro

1、Open the XCP Pro

（1）Choose "Start"→"All programs"→"XCP Pro"→"XCPPro.exe".

（2）When the XCP Pro has just started, the screen will display as shown below:



Note: You can also double-click the shortcut icon " " on the desktop to open the program.

2、Close the XCP Pro

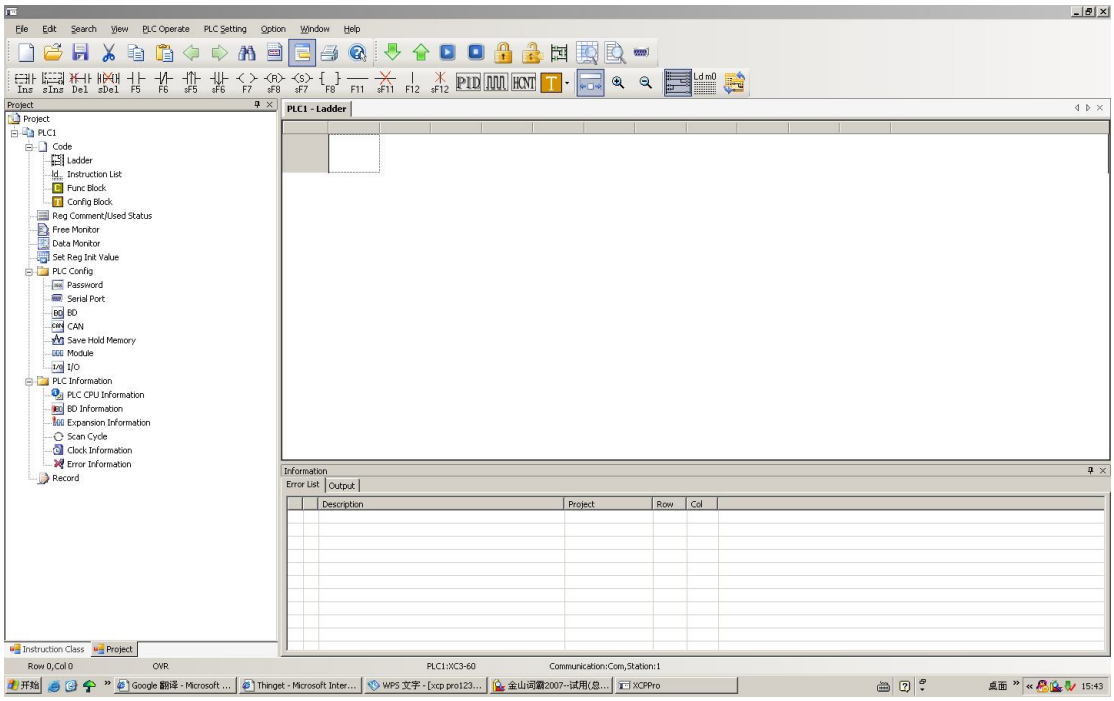
Choose "File"→"Exit", or just click the button " ", the XCP Pro will be closed.

2-2. **Create and open the project**

1, Create a new project

（1）Choose "File"→"New project Ctrl+N ", or click icon " ", the PLC model selection window will pop up.

（2）Select the PLC model in the "Select PLC Model" windows, and then click "OK", the new project is now completed. As shown below:



2, Open project

Choose "File"→"Open project", or click icon " ", then select *. XCp type of file in the "Open PLC project file" dialog box, then click the "open".

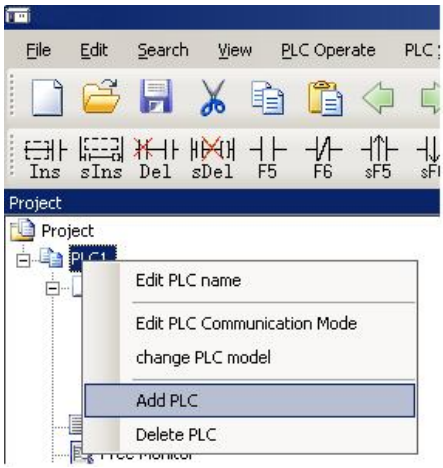
Note: Usually, when you open an XCP project, the system backs up the original file automatically, file named *. rak for backup. When you need to use this file, change the suffix to ". XCP", then open it in XCP Pro.

2-3. Add and delete the PLC mode

When a new project is created, its default name is PLC1. When you need to edit a number of PLCs, you can add multi-objects to the interface.

1、 Add PLC

Method 1：Click "File"→"Add PLC".



Method 2：In project column which is on the left side, right-click "PLC1"→"Add PLC", as follows:

When a PLC is added successfully, it will be named "PLC2" incremented each time by 1, and the project column in the left side will change also, as shown below:

When editing different

PLCs, you only need to

click the plc. Users can also modify the name, edit communication mode, change models or delete operation on the corresponding PLC.

2、 Deleting models

Method 1: Right-click the PLC and, select "Delete PLC".

Method 2: First select the PLC to delete, and then to "File"→"Delete PLC".

After the operation, the system will hint whether or not to delete, as follows:

To confirm the deletion, click "OK", otherwise, click "Cancel."

Note: The code between different PLCs can be copied to or from each other; the code between different projects can also use the copy and paste function.

3, Basic introduction to the edit environment

This chapter focuses on the basic structure of XCP Pro software, the main function of the Toolbar, the menu bar, the project bar, and shortcut keys in common use.

3-1．The basic form of interface

3-2．Conventional Toolbar

3-3．PLC Toolbar

3-4．Ladder logic Toolbar

3-5．Others

3-6．Menu bar

3-7．Project bar

3-8．Shortcut key introduction

3-1.The basic form of interface

Title bar: Behind the ECPPro，display the open ladder program file name and path.

Menu bar: Choose the operation to carry out in the drop-down menu.

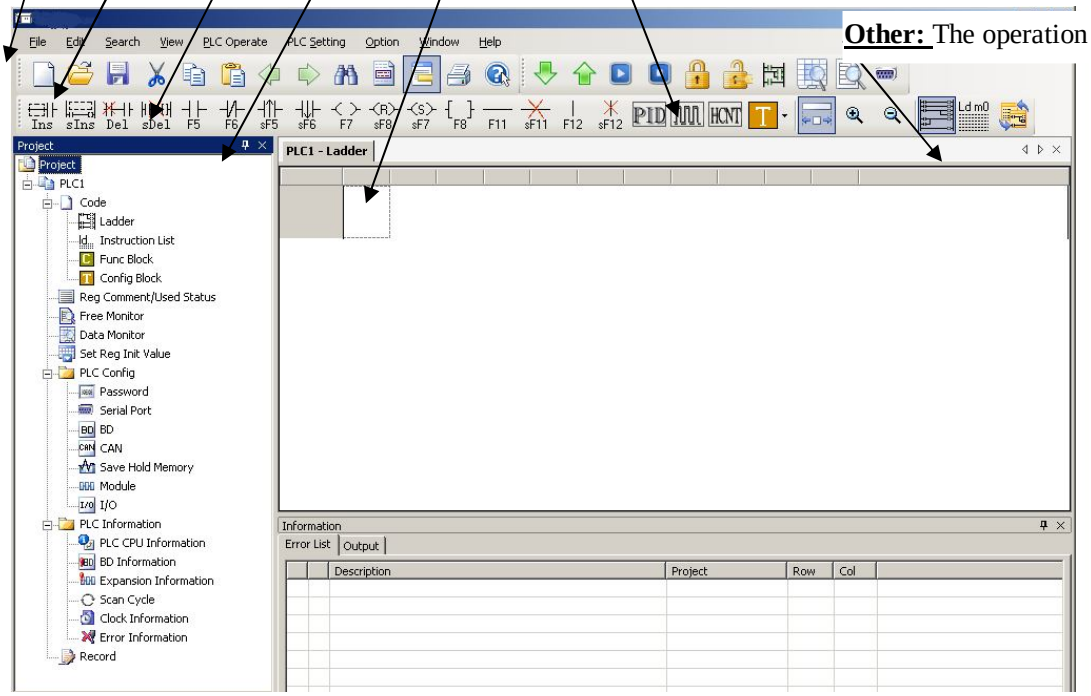
Conventional Toolbar: Display the icons of basic functions,such as copy, search.

Ladder input bar: When adding instruction symbol, select icon.

Windows switch bar: Switch windows

PLC Toolbar：Including upload, download, run, etc.

Other: The operation of ladder.



3-2. Conventional Toolbar

	New	New Create a Ladder program
	Open	Open an edited (saved) file
	Save	Save the modified or newly created file
	Cut	Cut in the the specified scope
	Copy	Copy within the scope of instruction
	Paste	Paste the cut and copied contents to a designated location
	Go back	Go back to the region of previous cursor
	Go forward	Go forward to the region of next cursor
	Search	Search the statement or string
	Node	Show node comment
	Instruction tooltip	Instruction tooltip open/close
	Printer	Print the current file
	Help	See related XC instructions for use

3-3. PLC Toolbar

	Download	Download the editing program or data into PLC EMS memory
	Upload	Read the program or data in PLC memory out
	Run	Run PLC
	Stop	Stop PLC

	Lock	Lock program
	Unlock	Unlock program
	Lad monitor	Monitor the operation process of ladder chart program
	Data monitor	Monitor and set state, data of all PLC soft elements
	Free monitor	Monitor and set state, data of specified PLC soft elements
	Software serial port config	Configuration of serial port for connection to PLC

3-4. Ladder Chart Input Bar

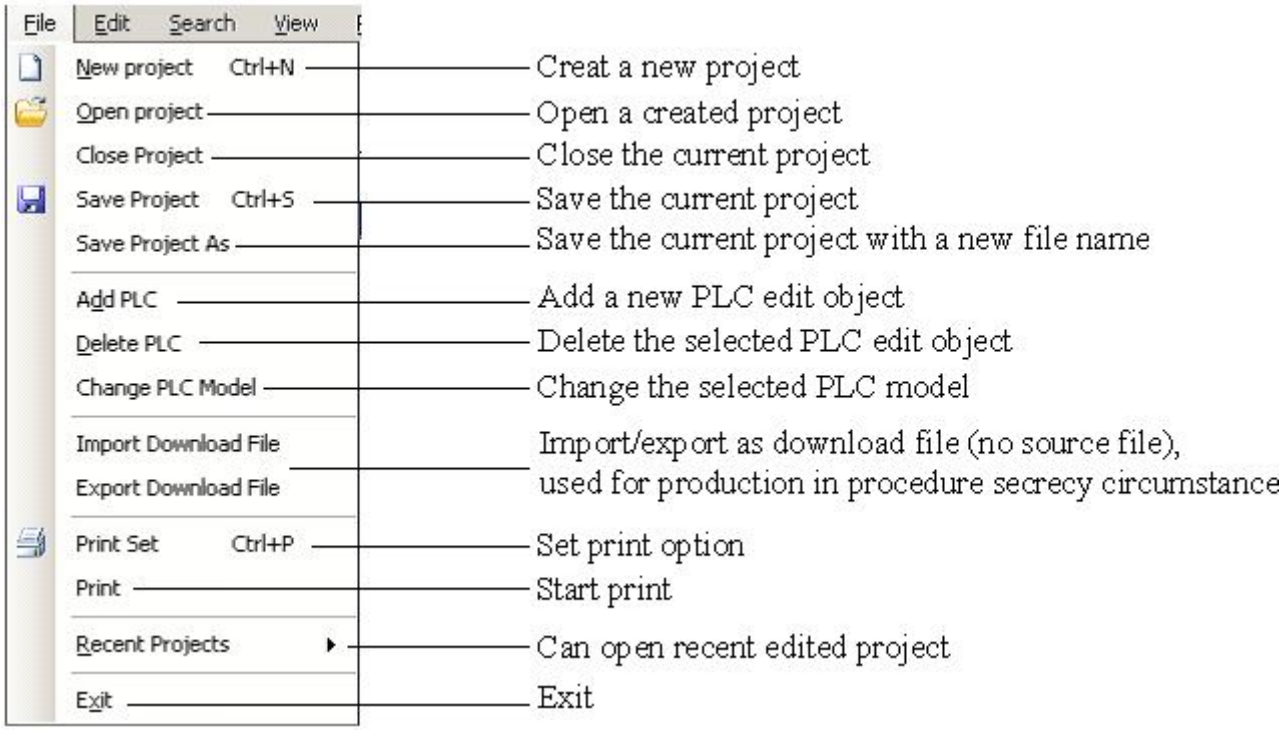
	Insert a node		Set
	Insert a row		Instruction frame
	Delete a Node		Horizontal Line
	Delete a Row		Delete Horizontal Line
	Normally Open Node		Vertical Line
	Normally Closed Node		Delete Vertical Line
	Rising Edge Pulse		PID Instruction Parameter Config
	Falling Edge Pulse		Pulse Instruction Parameter Config
	Output		High-speed Count 24-section Config
	Reset		G-BOX SMS Config

3-5. Other

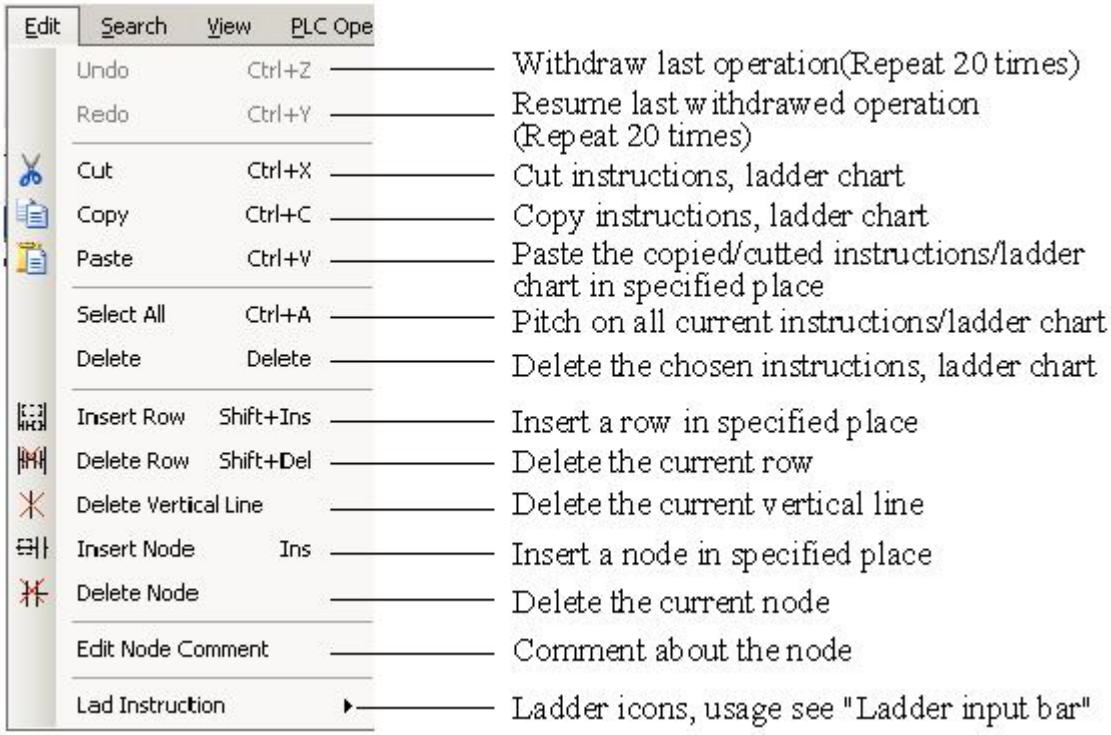
	Auto-adapt Col Width	Auto-adjust col width to a appropriate length
	Zoom In	Zoom in ladder chart
	Zoom Out	Zoom out ladder chart
	To Ladder	Convert instruction list into ladder chart
	To Instruction List	Convert ladder chart into instruction list
	Grammar Check	Check user procedure on grammar

3-6. Menu Bar Introduction

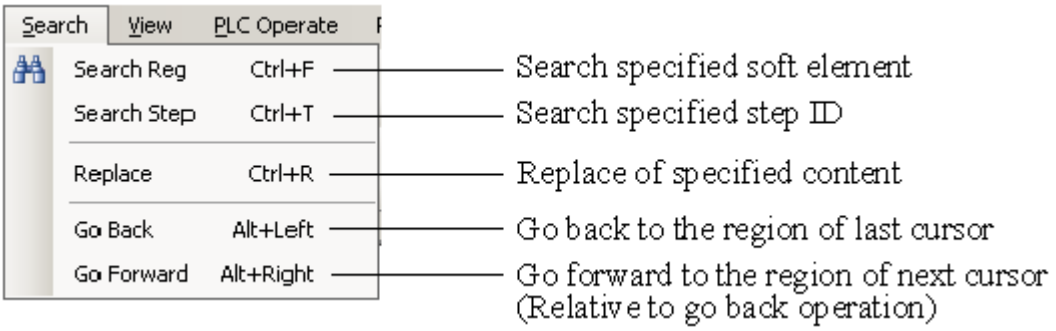
3-6-1. "File"



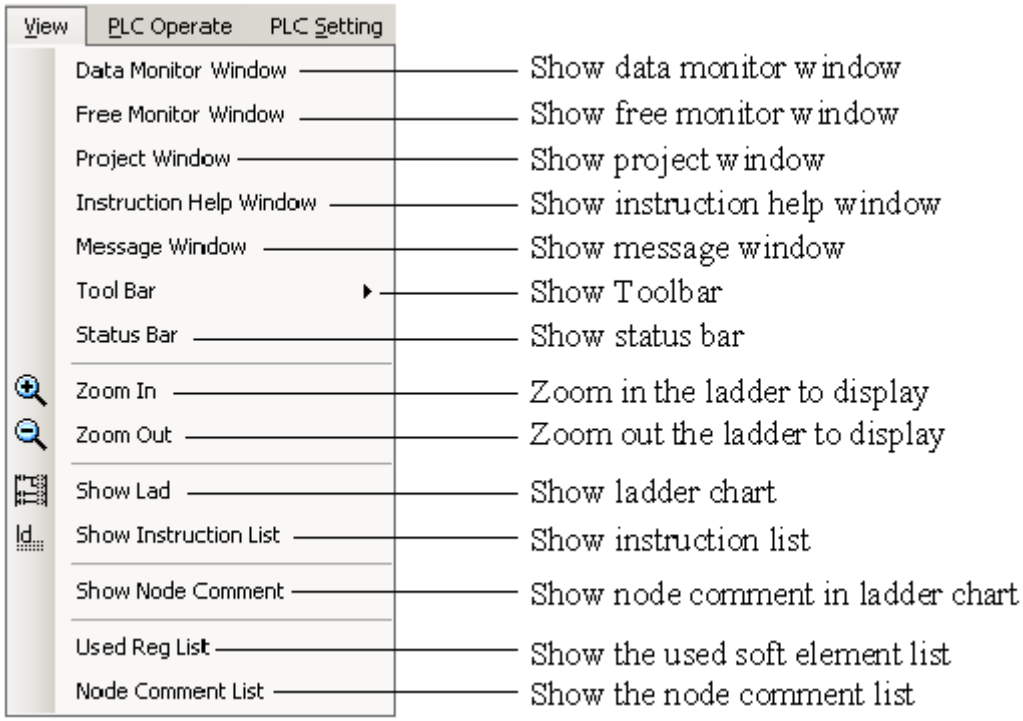
3-6-2. "Edit"



3-6-3. "Search/Replace"



3-6-4. "View"



3-6-5. "PLC Operate"

In the basic operation of the PLC, there are several items listed below that need attention:

- The use of secret download

  This protects the users' intellectual property, after the use of secret download, the program or data in PLC will never be able to upload, and the program is unable to be deciphered.

- Stop PLC when PLC reboot

  In the instance of a program error, in the run mode you will not be able to communicate, set PLC to stop mode, then you can re-download the user program and set PLC to run mode.

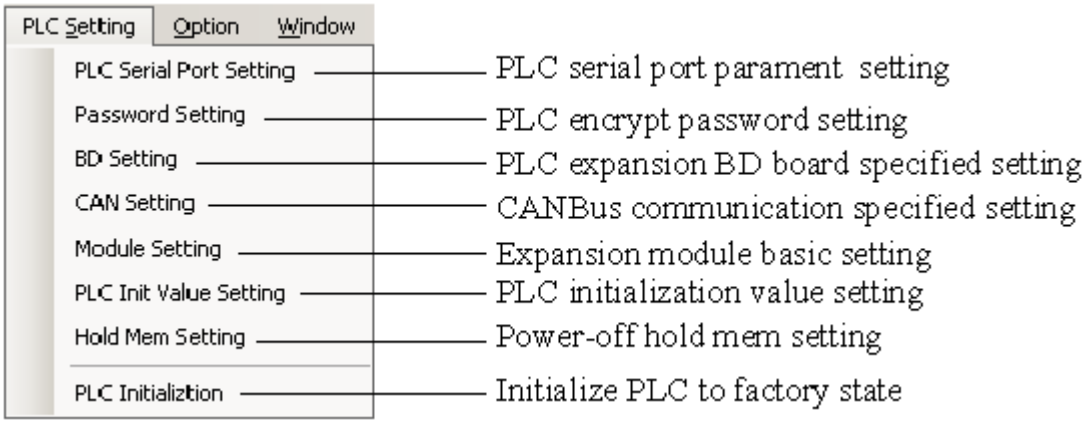
- Lock/Unlock program

  When using the function, first set the user program password, then download, password and program will download into PLC together. When the user wants to upload, they need to input the password to unlock the PLC first, and then they can upload.

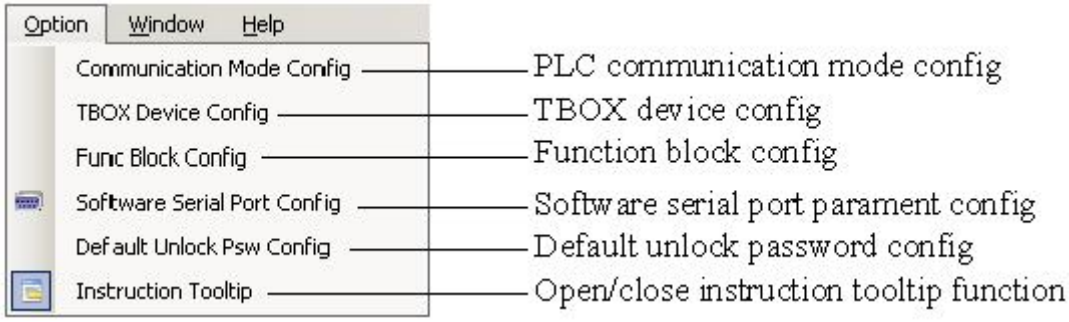
  When the PLC is password protected, it can be re-downloaded with a new user program,. The password is used to protect a specific user program.

Note: Specific PLC information see P29.

3-6-6. "PLC Setting"



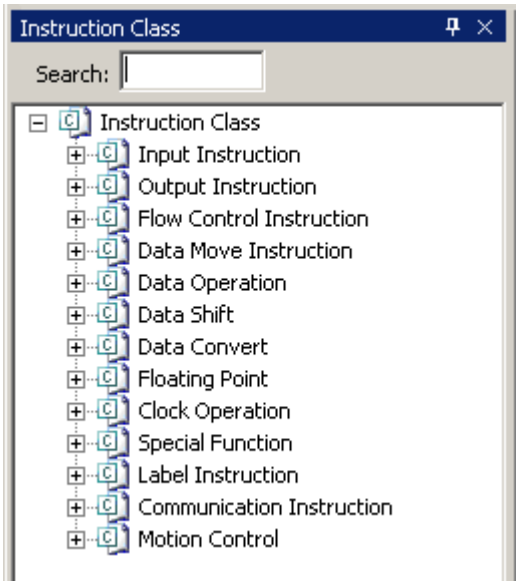
3-6-7. "Option"



3-7. Project bar

The left column includes "Project bar" .
The details in the project bar have been related to it in the menu bar and tool bar.

Instruction class bar: The instructions classified in accordance with the different functions, and then users can choose directly, as follows:



3-8. Shortcut key instruction

Ctrl+N	Create a new project	Shift+ F6	Falling edge pulse
Curls	Save project	F7	Output
Ctrl+P	Print config	Shift+ F8	Reset
Ctrl+Z	Undo	Shift+ F7	Set
Ctrl+Y	Redo	F8	Other
Ctrl+C	Copy	F11	Horizontal line
Ctrl+V	Paste	Shift+F11	Delete horizontal line
Ctrl+X	Cut	F12	Vertical line
Ctrl+A	Select all	Shift+F12	Delete vertical line
Delete	Delete	Ctrl+F	Search soft element
Shift+Insert	Insert a rung	Ctrl+T	Sear step ID
Shift+Delete	Delete a rung	Ctrl+R	Replace
Ins	Insert a node	Alt+Left	Go back
F5	Open node	Alt+Right	Go forward
F6	Close node	Ctrl+G	Grammar check
Shift+ F5	Rising edge pulse	F1	Help

4, Simple function realization

This chapter focuses on the use of PLC basic functions, including online, upload/download program, run/stop PLC, upload/download data, specified information search, PLC initialization, lock/unlock program, print, etc.

4-1．Online

4-2．Upload/download program, and PLC status control

4-3．Set PLC initialize value, upload/download data

4-4．PLC and module information enquiries

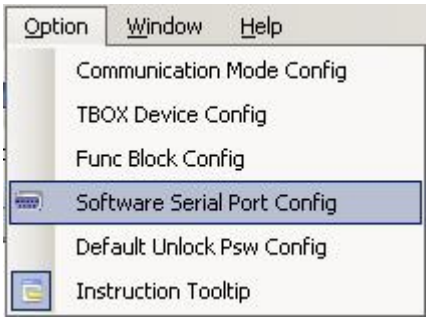
4-5．PLC initialization

4-6．Lock/Unlock program

4-7．Print

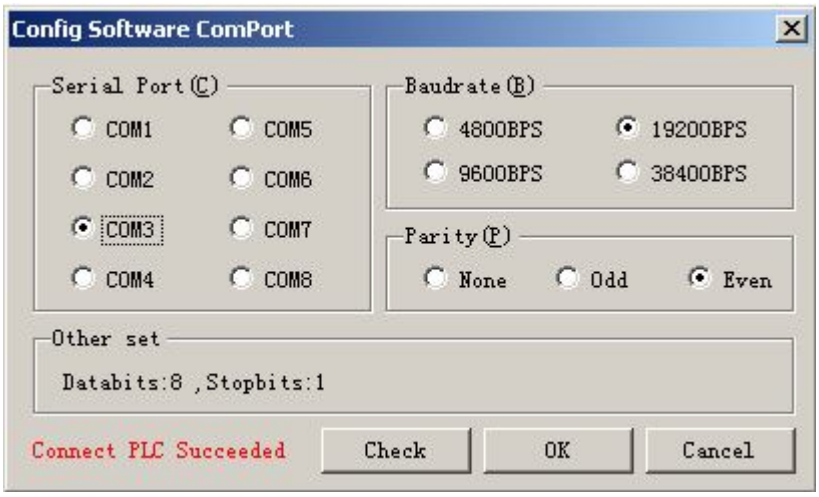
4-1. Online

1, Click menu bar, "option"→"software serial port config", or click icon " "。

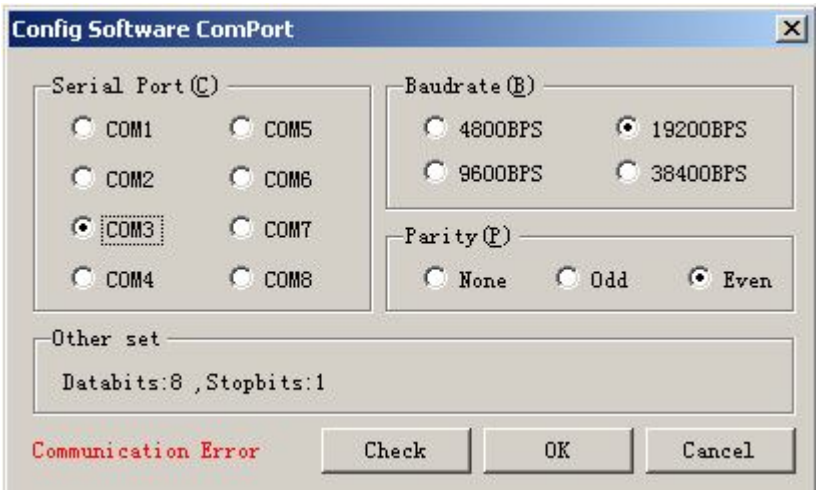


2, In "Config Software Com Port" window, choose the correct serial port, baud rate, parity, or click "Check", software will check and set correct serial port, baud rate, parity automatically.

3, When "Connect PLC Succeeded" shows red in the left bottom of "Config Software Com Port" window, online connection is successful, click "OK", to continue other operations.



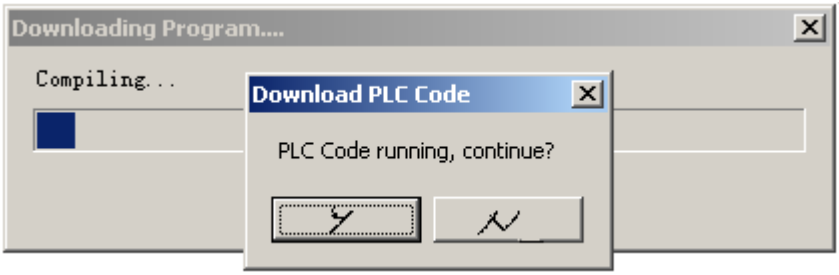
4, When online fails, "Communication Error" will show in red wording in the left bottom of "Config Software Comport" window, please check computer comport, communication cable and PLC communication port and repeat procedure.



4-2. Download/Upload program, PLC state control

1, When you are successfully online, click "PLC operation" in menu bar→ "upload program&data ", or click " " icon, this will upload the PLC program. Click "project" in menu bar→ "save project", or " " icon, this will save program.

2, When you are online successfully, click "PLC operate" in menu bar→"Download Program & Data", or click icon, the program will download into the PLC. If the PLC is running, the "stop running PLC" window will pop up.



Choose "OK", The PLC will stop running, then download your new program. While downloading, the gauge pop up will show.

After downloading program, click button to run the PLC.

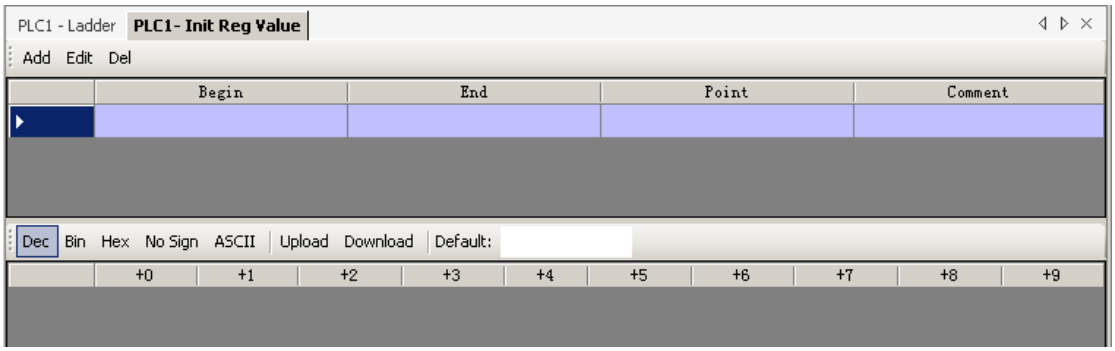
3, State control

After online, click button to run the PLC; click button to stop the PLC.

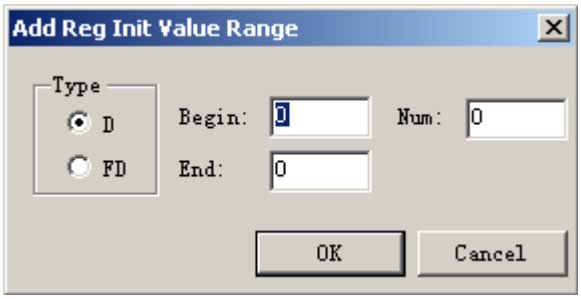
4-3. Set PLC initial value, upload/download data

4-3-1. Initial value settings

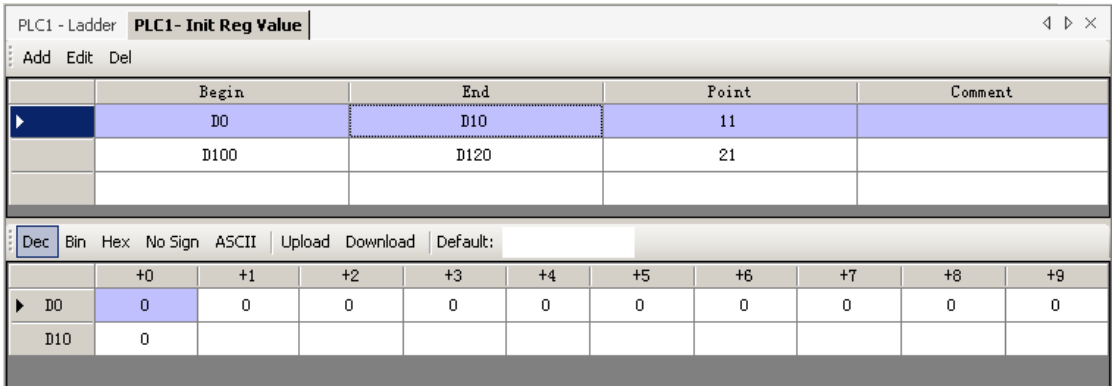
Click "Set Reg Init Value" in project bar, the "Init Reg Value" window will pop up.



- "Upload":Upload the data of PLC soft element; "Download": download the set value into PLC.
- The numerical value can switch between "decimal","binary","hexadecimal","no symbol","ASCII".
- Add soft element: Click "add" button, "Add Reg Init Value Range" in the window pop up, choose register model 'D' or 'FD', then set the start and end address.



The chart below is the initial value settings of adding two registers, double-click address ID, and modify numerical value.


PLC1 - Ladder
PLC1- Init Reg Value
Add Edit Del
Begin End Point Comment
D0 D10 11
D100 D120 21
Dec Bin Hex No Sign ASCII Upload Download Default:
+0 +1 +2 +3 +4 +5 +6 +7 +8 +9
D0 0 0 0 0 0 0 0 0 0 0
D10 0

4-3-2. Upload/Download data

Method 1: For bit address values, then use "upload","download" button.

Method 2: For word address values, then use "PLC operate" in menu bar→"Upload data", "Download data".

4-4. PLC and module information enquiry

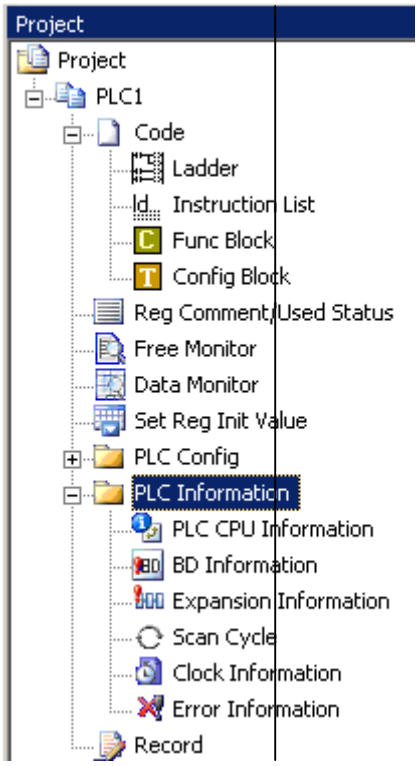
Method1:

① Click "Project column"→"PLC information", the catalog will appear;

② Click "PLC main unit information","BD board information", "expansion module information","scan cycle", or "error information" information.

Method 2:

Click correlative items in the left side, "Project column"→ "PLC information", will display information, shown on right.



4-4-1. PLC main unit information

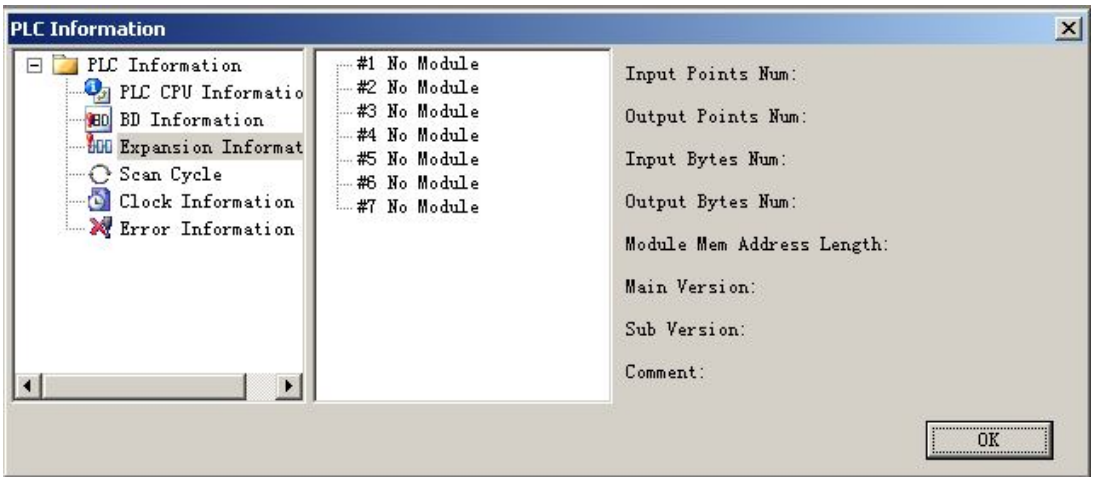
Shows PLC series, model, slave version and subsequent master version.

4-4-2. BD board information

Shows BD input/output points, input/output bytes, primary/secondary version, and BD board name.

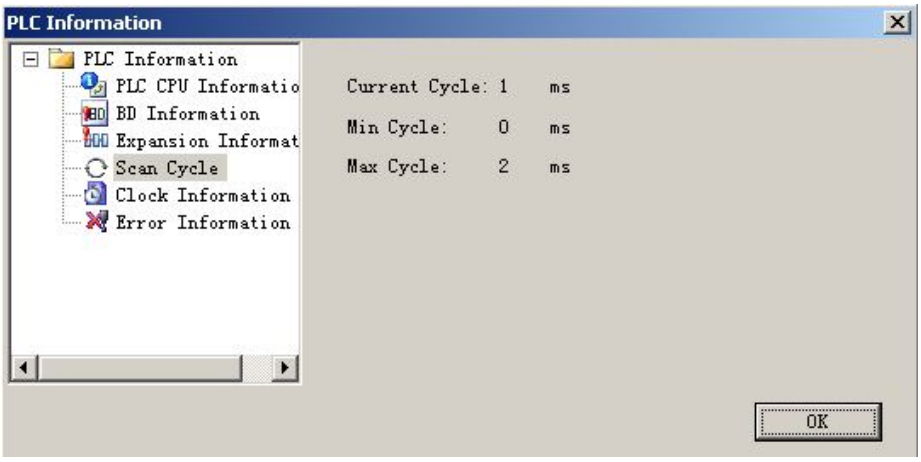
4-4-3. Expansion module information

Shows module information (content as BD board).



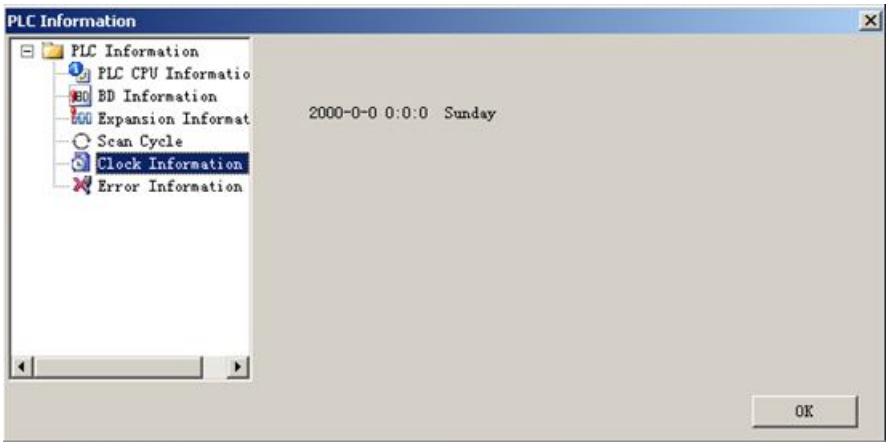
4-4-4. Scan cycle

Show current cycle, Min/Max cycle of ladder chart program.



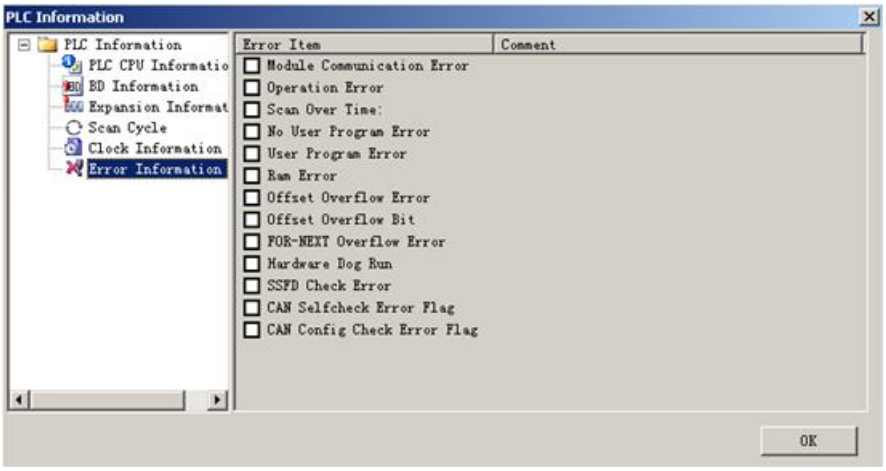
4-4-5. Clock information

Shows current clock date information.



4-4-6. Error information

Shows compilation error information.



4-5. PLC Initialization

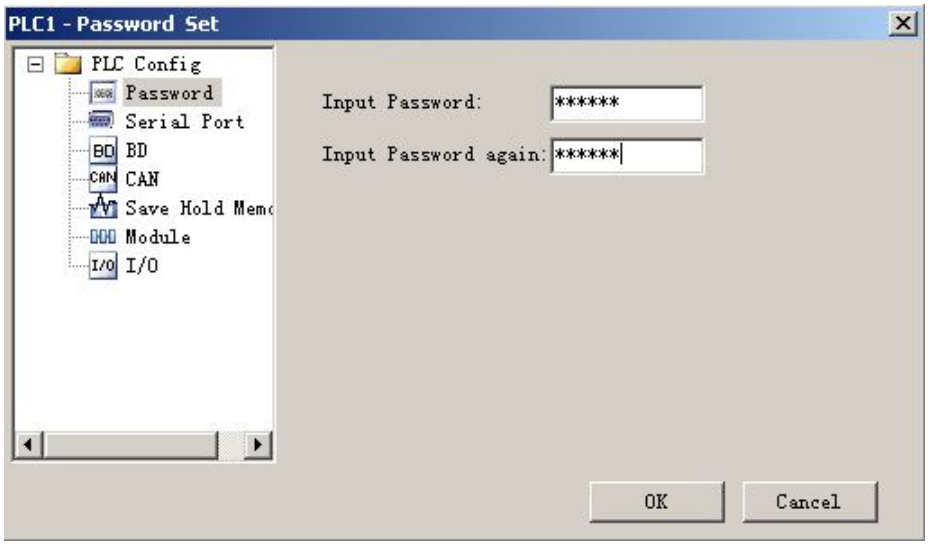
Select "PLC setting" in main menu bar→"PLC Initialization", PLC will be initialized back to original factory settings.

4-6. Lock/Unlock program

When password protection is set, the PLC program cannot be read out in locked state. If repeated entering of wrong password error occurs the PLC will block password automatically. To reopen password entry, switch off the power to the PLC and apply power again then re-enter password and upload.

4-6-1. Password settings

Click "PLC setting" in project bar →"Password", or "PLC config" in menu bar→"password", now the password can be set and modified. The password is make up of 6 letters/numerals.The system default password is six zeros, i.e. is no password.



4-6-2. Lock/Unlock

When the password is successfully entered, click icon to lock the current PLC. Or click icon to unlock the current PLC, so the program can upload as normal.

4-6-3. The default password decryption settings

Top menu bar “Option"→ "Default Unlock Psw Config", set unlock password.

In the process of using a locked PLC frequently, or enterin different passwords to different locked PLCs, the user can set a default decryption password. As shown above, the user can set a number of decryption passwords. Then during uploads there is no need to enter passwords repeatedly.

4-7. Printing

Click "File"→"Print", the print config window will pop up, the program can be printed in ladder chart or instruction mode.

Print object:

- Ladder chart, command, note;

② Print all or part (separated with cursor), all is allowed.

Print settings:

① Choose printer

② Print range

③ Print amount

5, Program operation

This chapter focuses on the introduction in the XCP Pro program environment, including methods for configuration and idiographic operation process, which may be involved in a wide variety of programs.

5-1 . Program mode

5-2 . Instruction sign input

5-3 . Ladder chart edit

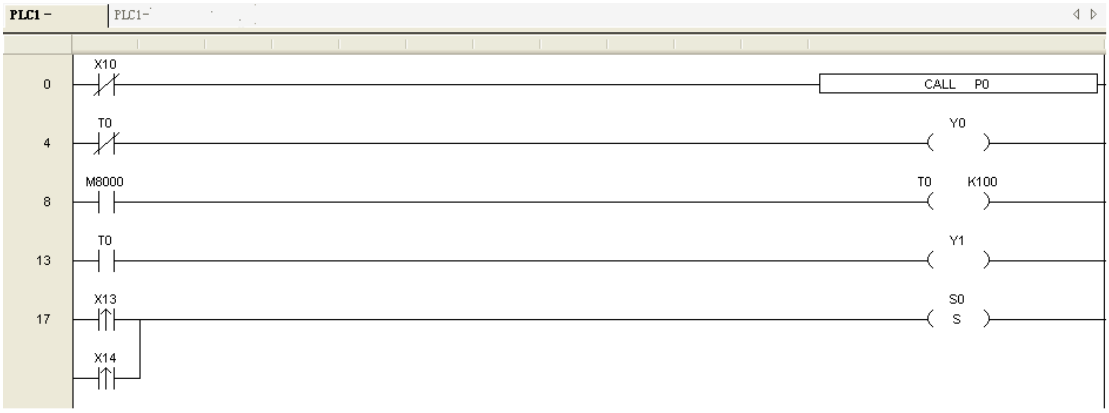
5-4 . Correlative configuration

5-5 . Soft element monitor

5-1. Program mode

XCP Pro can program in two methods: ladder logic or statement list program.

Ladder logic programming: Is chosen by the majority of PLC programmers and maintenance personnel.



Statement list program: Is used for PLCs where maintenance personnel have no access to the PLC and ladder monitoring is not required.

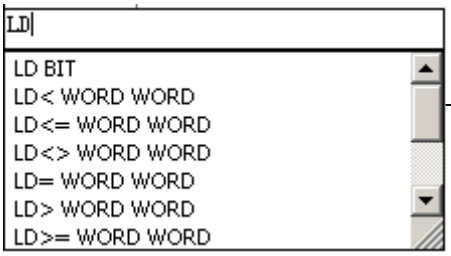
```
PLC1 –          PLC1-
0     LDI     X10
2     CALL    P0
4     LDI     T0
6     OUT     Y0
8     LD      M8000
10    OUT     T0      K100
13    LD      T0
15    OUT     Y1
17    LDP     X13
19    ORP     X14
21    SET     S0
23    LDP     X12
25    RST     T1
27    RST     T0
29    STL     S0
31    LDI     T1
33    OUT     Y2
35    LD      M8000
37    OUT     T1      K50
40    RST     Y1
42    LD      T1
44    OUT     Y3
46    STLE
47    FEND
48    P0
50    LD      M8000
52    OUT     Y3
54    LDP     X12
56    RST     Y3
58    SRET
59    LD      M8000
61    PLSR    D0      D2      D4      Y0
66    OUT     C600    D10     D100
```

5-2. Input instruction

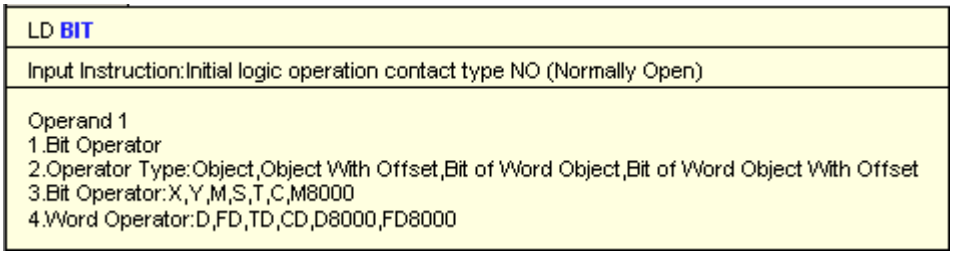
5-2-1. Instruction prompt

When users write instructions in ladder logic mode, they can open instruction prompt function via click " " icon. In manual input state, the system will automatically list correlative instructions for users to choose, and put up choice tips on operand.

For those not familiar with user's operation.



Shown as the left figure, when input "LD", the system will pop up instructions start with "LD", convenient for users' operation that is not familiar with the instructions.


LD BIT
Input Instruction:Initial logic operation contact type NO (Normally Open)
Operand 1
1.Bit Operator
2.Operator Type:Object,Object With Offset,Bit of Word Object,Bit of Word Object With Offset
3.Bit Operator:X,Y,M,S,T,C,M8000
4.Word Operator:D,FD,TD,CD,D8000,FD8000

After instruction confirmed, the system will put up correlative prompt on operand, such as operand attribute and available address type,

5-2-2. Input node

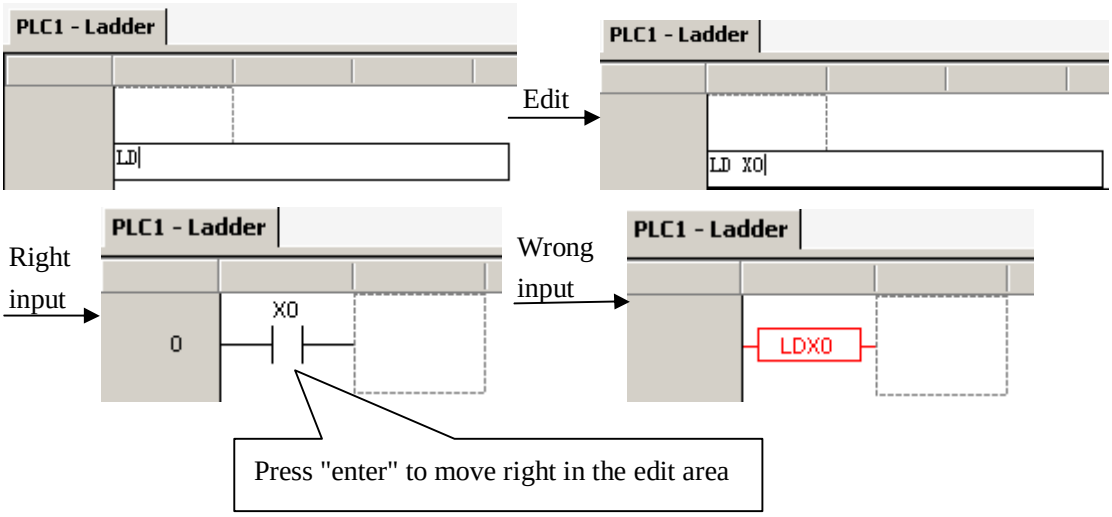
Icon	Function	Shortcut key
	Commonly open node	F5
	Commonly close node	F6
	Rising edge	Shift+F5
	Falling edge	Shift+F6

This example will explain the instruction input:

Mouse left click on a certain node in ladder chart, the display area in dotted line box denotes the chosen node;

first click "

" icon (or press F5 key), the figure will show a dialog box (LD M0), it can edit instruction and loop in dialog box. When editin is finished, press "Enter" button.



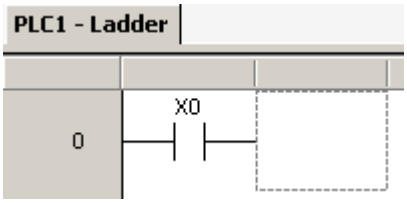
5-2-3. Input loop

Icon	Function	Shortcut key
	Output loop, timer and counter	F7
	Set loop	Shift+F7
	Reset loop	Shift+F8
	Edit instruction	F8

Next take this example to explain the instruction input:

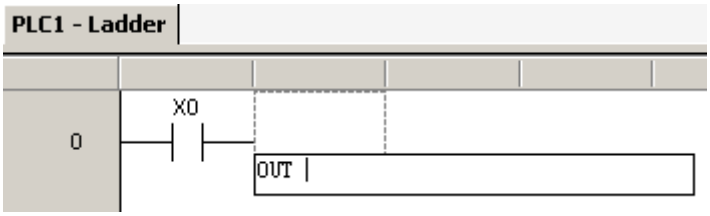
Ex1: Loop output

- After the ladder's first node X0 input, the dotted line box moves right one lattice;

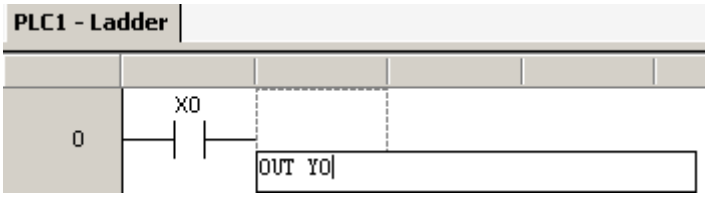


② Click "

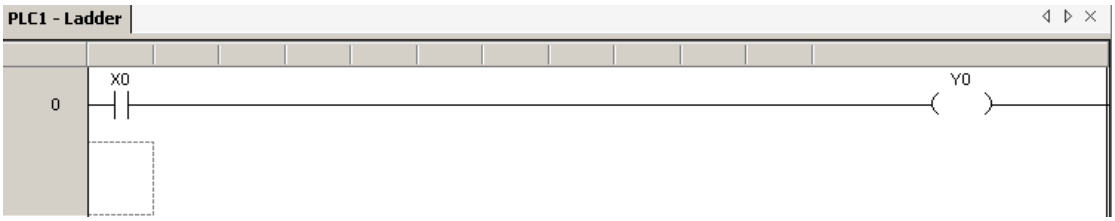
" icon (or press F7 key), the instruction dialog window pop up for (OUT);



- Input Y0 in the cursor place;

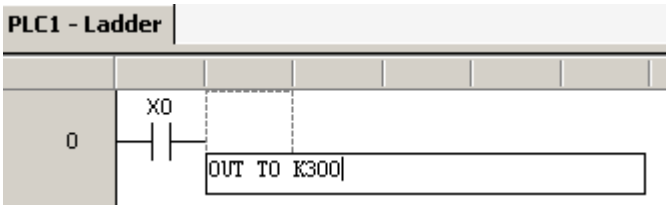


④ Press the "Enter" key, if input is correct, then dotted line box will move to the next row; if not, the node will show in red, then double-click the node to modify.

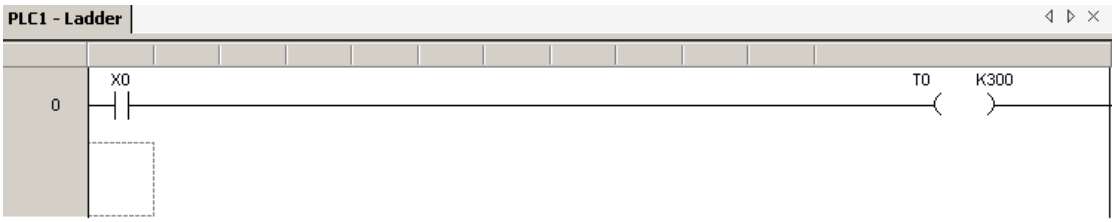


EX2: Timer and counter input

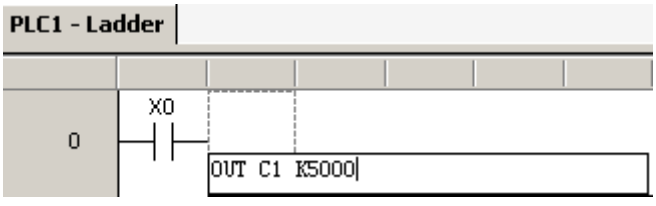
- The input method for timer: OUT+Timer number+blank+K timing seconds



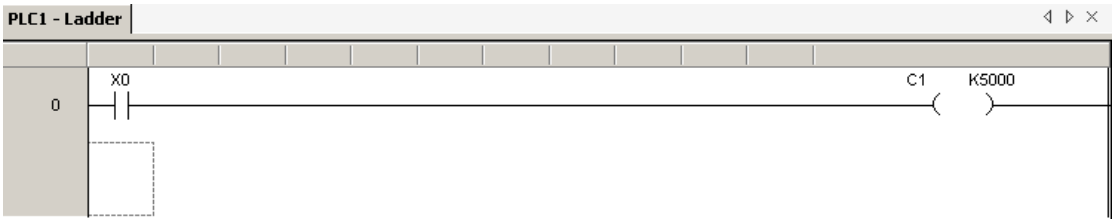
After pressing enter, then dotted line box line will wrap.



- Counter input mode: OUT+blank+counter number+blank+K count value

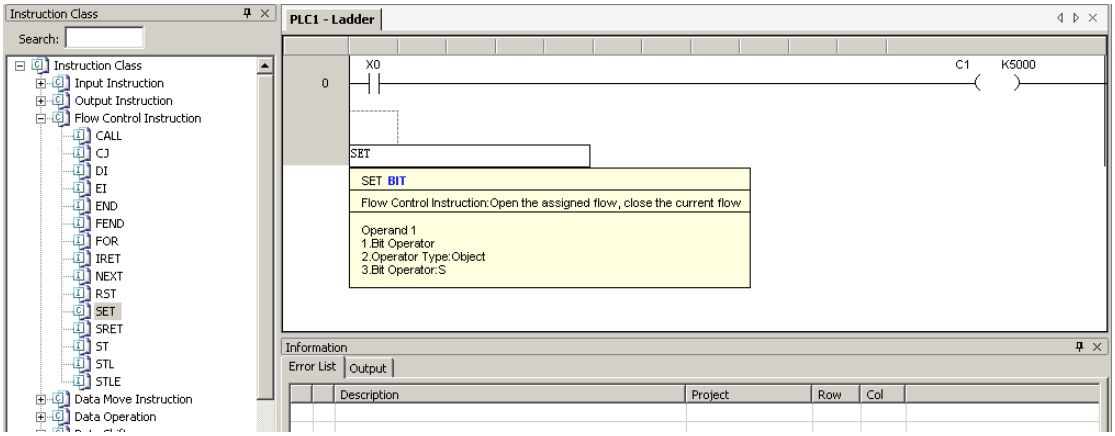


After pressing enter, the dotted line box line will wrap.



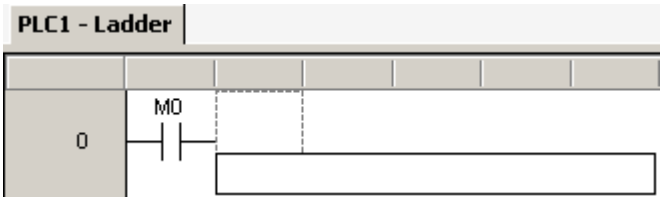
Ex3: Operand instruction input

- Click "F8" icon (or press F8 key), on left side column will show instruction list; double-click the input instruction, the instruction is activated in the appointed area, input parameter.

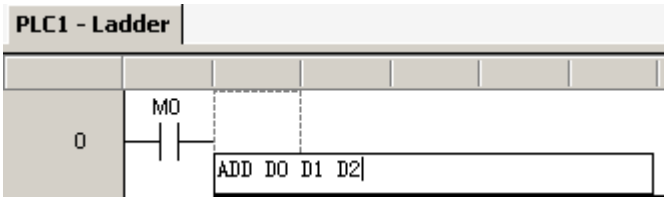


- Users who are familiar with instructions can double-click the input area, and manually input instructions and parameters;

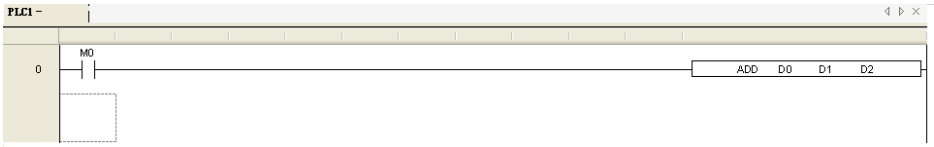
  Double-click the activated area:



Input instruction and operand in dialog box.



- After input is entered, then input area line will wrap.



Notice:

- Instruction input mode: instruction + blank + operand.
- The red node means an error has occurred.

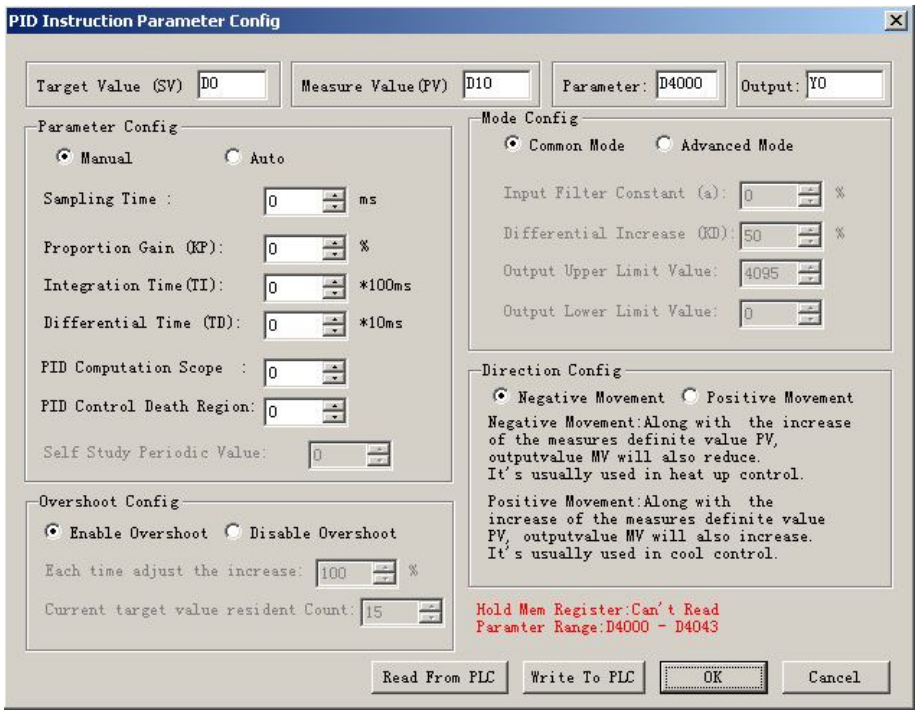
5-2-4. Special instruction

The several instructions mentioned below, can let the user complete an instruction set through the icon dialog box and format the parameter settings at a glance.

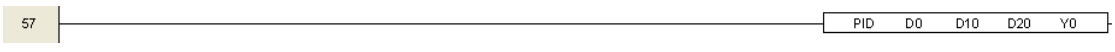
1、 PID instruction

- Parameter settings and instruction transfer

Put the cursor in instruction input point, then click "PID" icon in instruction bar, the parameter set dialog box will pop up, the settings include address, PID parameter in common use, mode settings, overshoot, direction, etc. As follows:



After setting the parameter, click "OK", the instruction will appear in the ladder chart window, as follows:



- Parameter modification

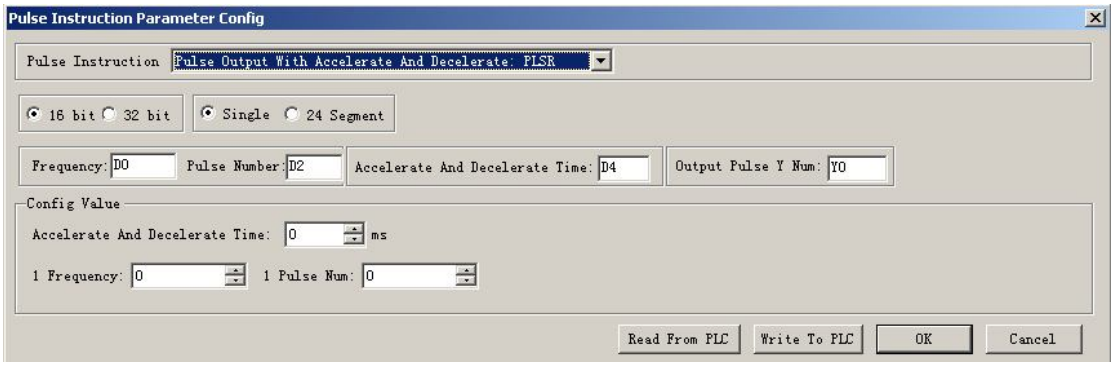
To edit parameters, double-click the instruction to modify the addresses.

2, Pulse output instructions

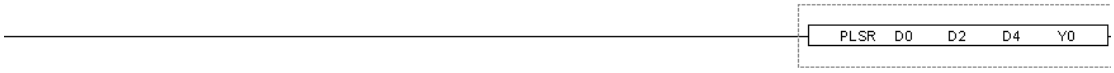
- Parameter settings and instruction calling

Position the cursor on instruction input point, then click "" icon in instruction bar, parameter setting dialog box will pop up, then set items including instruction types, bit, segment, frequency, accelerate and

decelerate time, config, address, etc. As shown below:



When parameter settings are completed, click "OK", this will present to the ladder chart area, shown as follows:



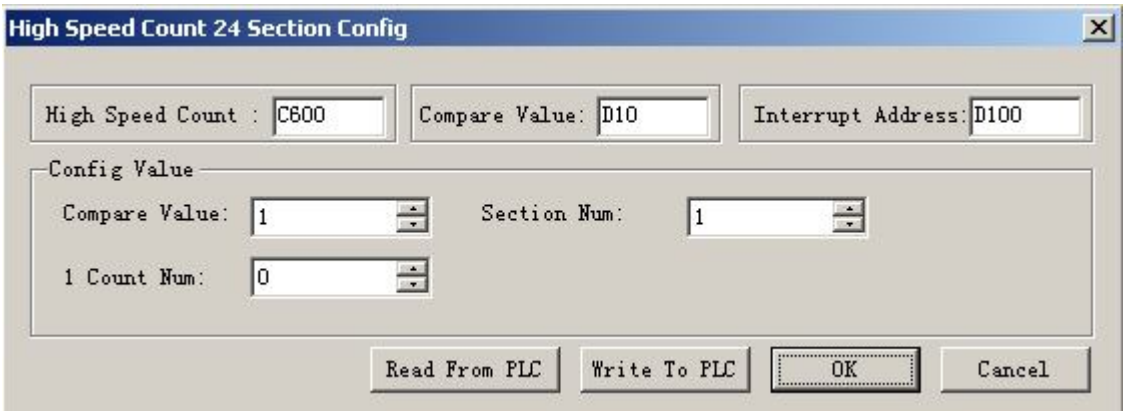
- Parameter modification

Modify the parameters, by double-clicking the instructions to modify an address. You can also single-click the instruction, then click "PLSR" to modify parameter.。

3, High speed counter 24-segment instruction

- Set parameter and call instructions.

Click the "HCNT" icon in the instruction bar, parameter config box will pop up. The config items include high speed count; compare value, 24-segment config value, etc. As shown below:



The instruction will appear in ladder chart appointed area, as shown below:

- Parameter modification

Double-click the instruction to modify the address. You can modify other parameters via "HCNT" icon.

4, The G-BOX SMS configuration

When XCP Pro is connected to the G-BOX successfully, you can set the SMS config.

- Parameter config and instructions call.

Click " " icon in the instruction bar, dialog box will pop up, the config parameter includes instruction name, COM port, phone number, first address, SMS content, as shown below:

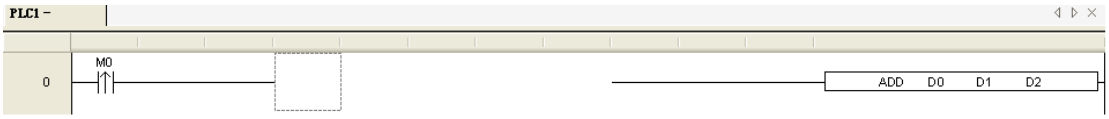
5-3. Ladder chart edit

5-3-1. Horizontal line and vertical line operation

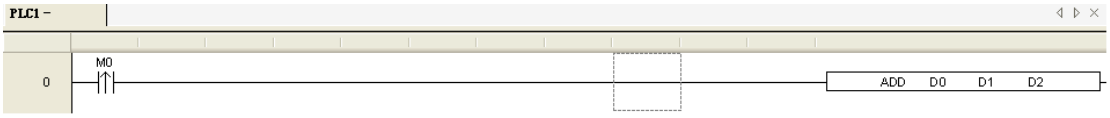
Icon	Functions	Shortcut key
	Insert horizontal line	F11
	Insert vertical line	F12
	Delete horizontal line	Shift+F11
	Delete vertical line	Shift+F12

➢ **Insert horizontal line and vertical line**

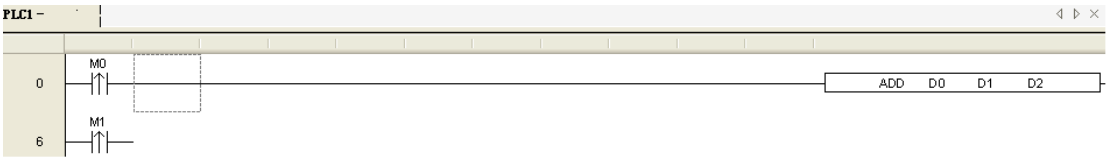
□ Move the dotted line box to input place



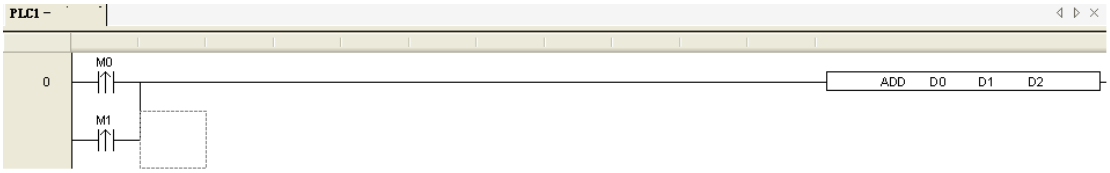
Click (or press F11 key)。



□ Move the dotted line box to upper right of the input place



Click (or press F12 key)



➢ **Delete horizontal line and vertical line**

① Delete horizontal line: Move the dotted line box to delete place, click (or press Shift+F11 key) .

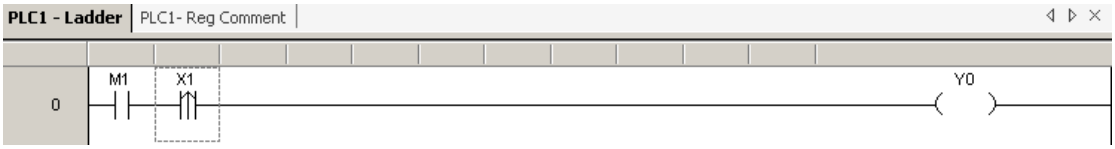
② Delete vertical line: Move the dotted line box to upper right of the delete place, click (or press

Shift+F12 key) .

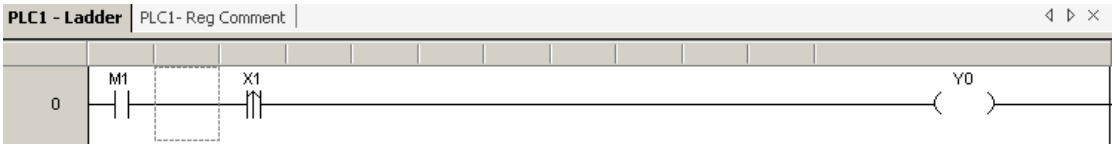
5-3-2. Node and row operation

Icon	Function	Shortcut key
	Insert node	Ins
	Insert row	Shift+Ins
	Delete node	Del
	Delete row	Shift+Del

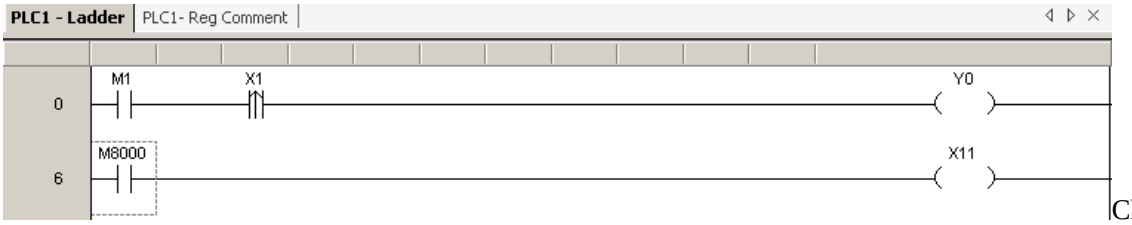
- **Insert node:** move the dotted line box to input place.



Click (or press Ins key) , node right extension, a blank line appear in dotted line box.

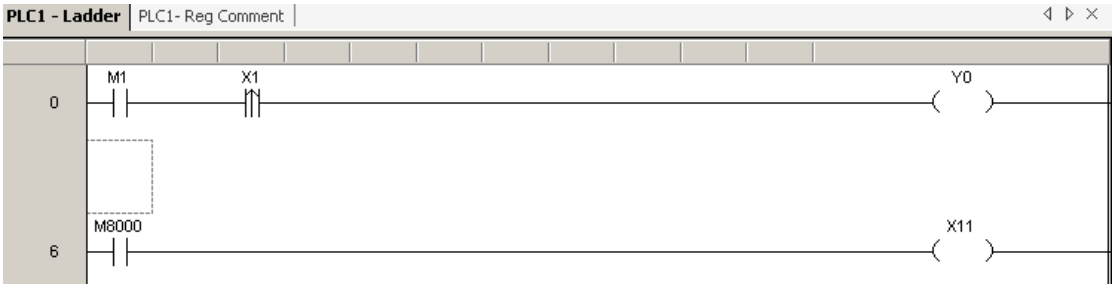


- **Insert row:** move the dotted line box to input place.

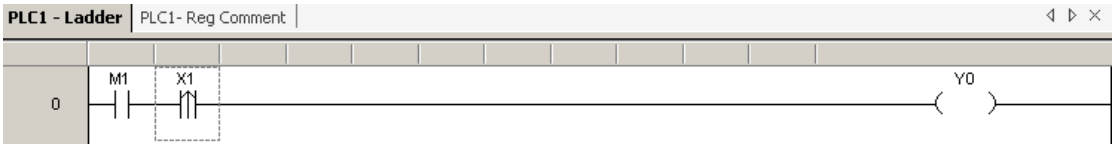


Click

(or press Ins key) , ladder chart down move a row, a blank row appear in dotted line box.

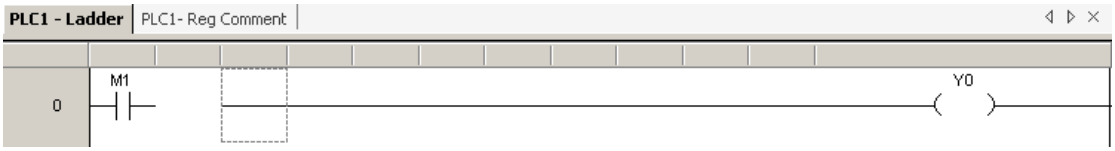


- **Delete node:** move the dotted line box to input place.

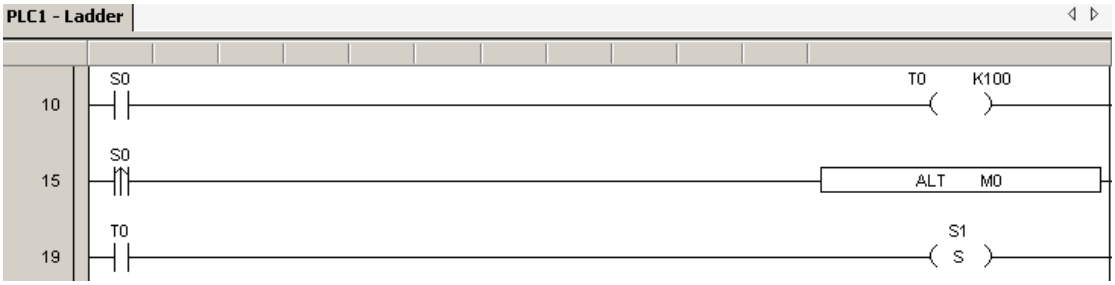


Delete

(or press Del key), dotted line box right move a line, a blank line appears.

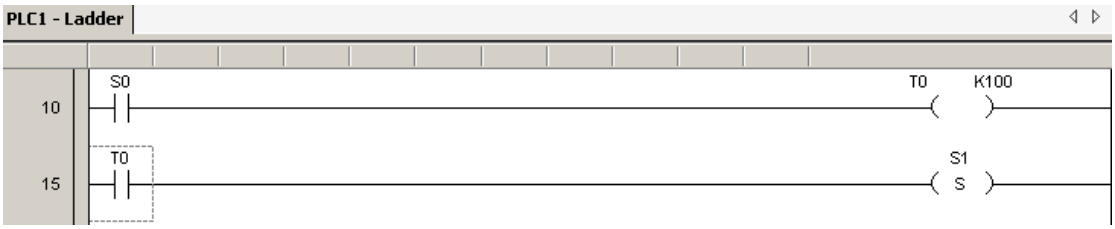


- **Delete row:** move the dotted line box to input place.



Click

(or press Shift+Del key), the row of dotted line box is deleted, the next row up will move a row automatically.

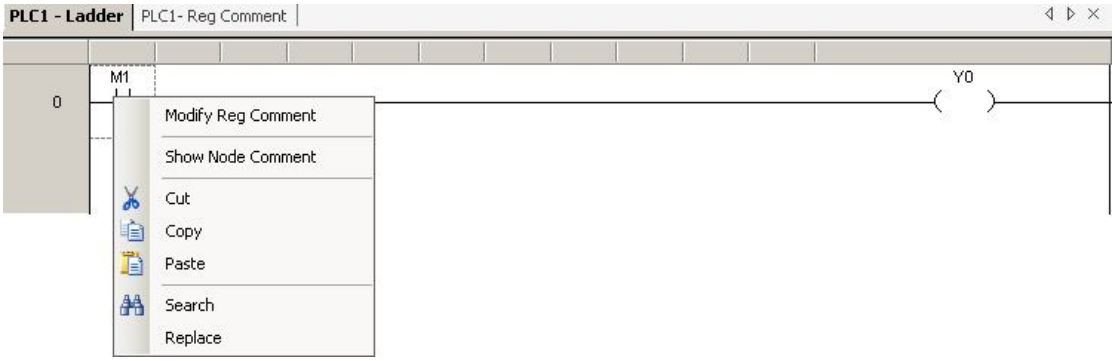


5-3-3. Edit comment

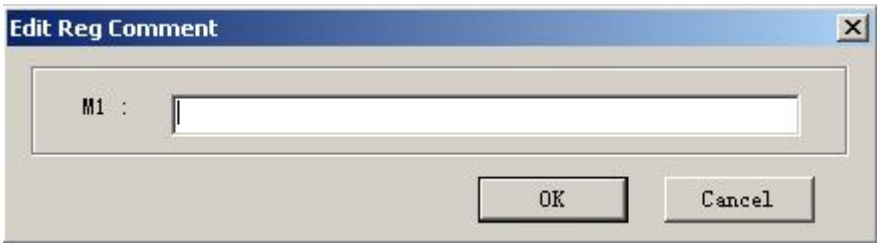
Click "view" in menu bar→"show node comment", then you can display and close ladder chart node comment.

1, Add soft element comment

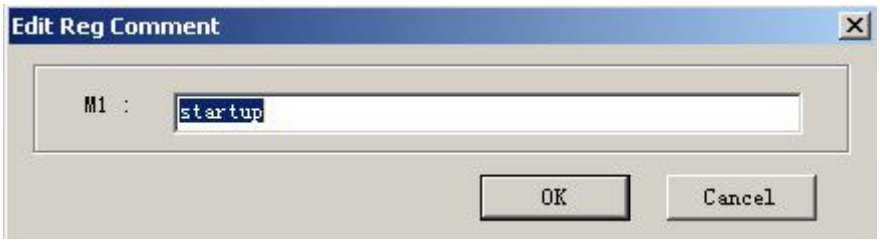
① Move the dotted line box to comment soft element, right click, then menu will pop up.



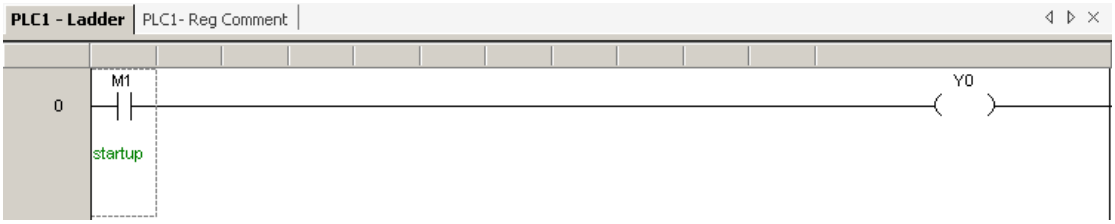
② Click "Modify Reg Comment " icon, the edit comment box will pop up;



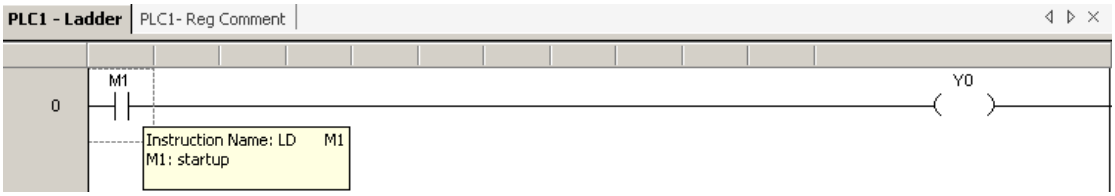
③ Add and modify words in dialog box;



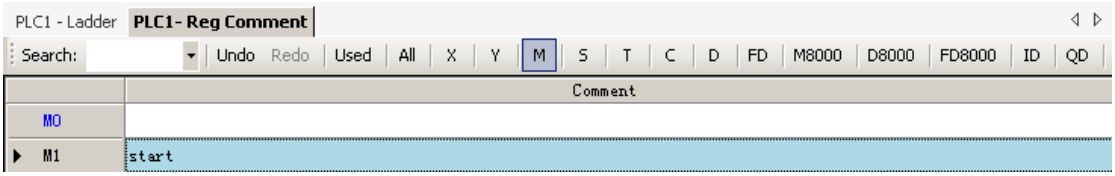
④ Click "OK", then show node comment, all the comment information will show in the bottom of the element.



➢ In the mode of ladder chart don't show comment, move the mouse to soft element, then an information box will emerge to show soft element comment information.

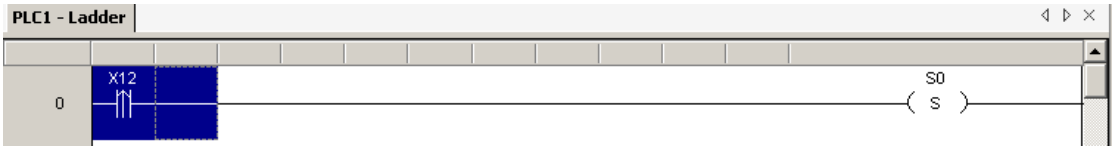


- Click "Reg Comment" in the left project bar, or click "View" in menu bar→ "Node Comment List", PLC soft element comment table pop up, you can view, modify, and add all soft elements comment in the table. The display mode can be a classified display, it can also be a whole display.

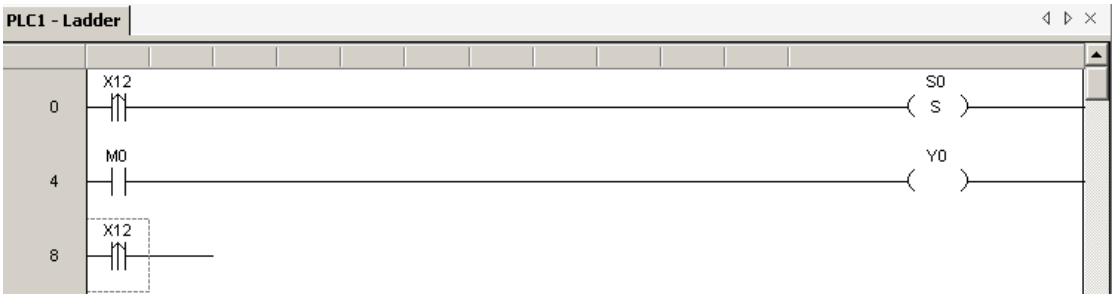


5-3-4. Ladder chart copy and cut

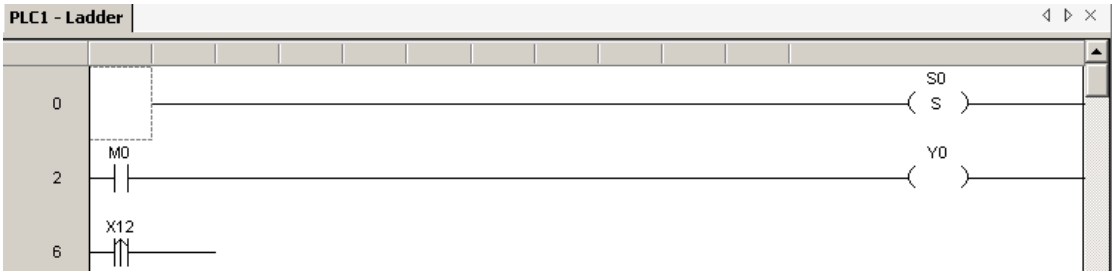
- **Copy:** move the dotted line box to input place, press and drag the mouse, the selected area will show in hi light, click (or press Ctrl+C);



Then move the dotted line box to paste place, click (or press Ctrl+V)



- **Cut:** drag mouse and select the cut area, press (or press Ctrl+X), then move the dotted line box to paste place, click (or press Ctrl+V).



Note: You can press Ctrl to select multi-node for cutting or pasting.

5-3-5. Ladder chart instruction management

1, The fold and unfold of program.

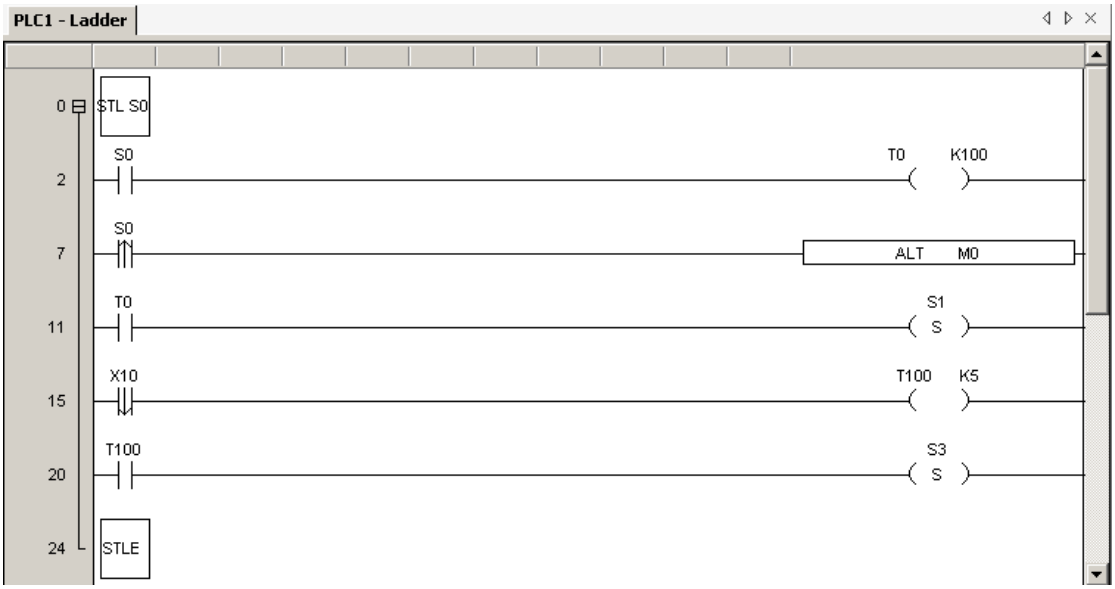
When user procedure is too long, effective instruction management can help with clear area management.

After being folded, the program is much more concise, to help users better grasp of the overall program situation.

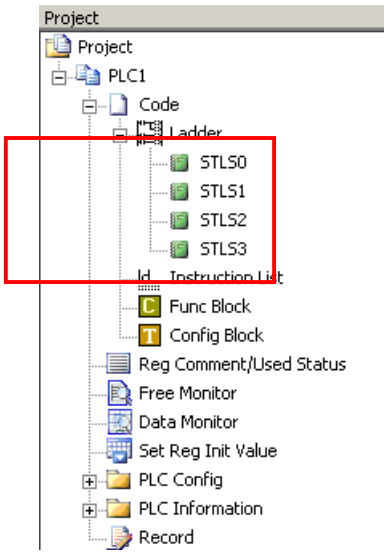
2、 GROUP/GROUPE

"GROUP/GROUPE" will help to organize sentence into groups, fold/expand are also suitable.

"GROUP" and "GROUPE" instructions don't have practical significance, only to organise the program into labelled sections. Usually, a GROUP will start with "GROUP", and ends with "GROUPE", the middle part is the effective user program. The following is an example of GROUP.



At the same time, it is convenient for management, All items are noted in "ladder", double-click to expand.



5-4. relevant config

5-4-1. PLC serial port settings

1, Click "PLC config" in the project bar→"serial port", serial port set box will pop up.

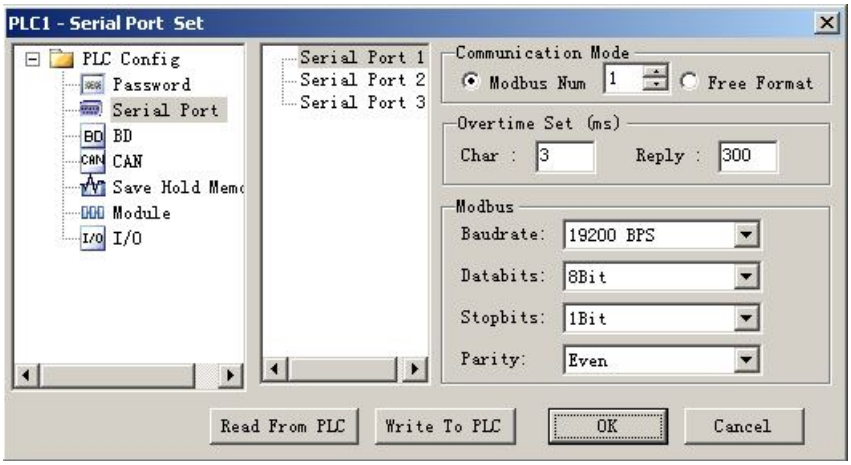
2, Click "serial port 1", "serial port 2", "serial port 3" to set different serial ports.

3, There are two optional communication modes, "Modbus" and "Free protocol".

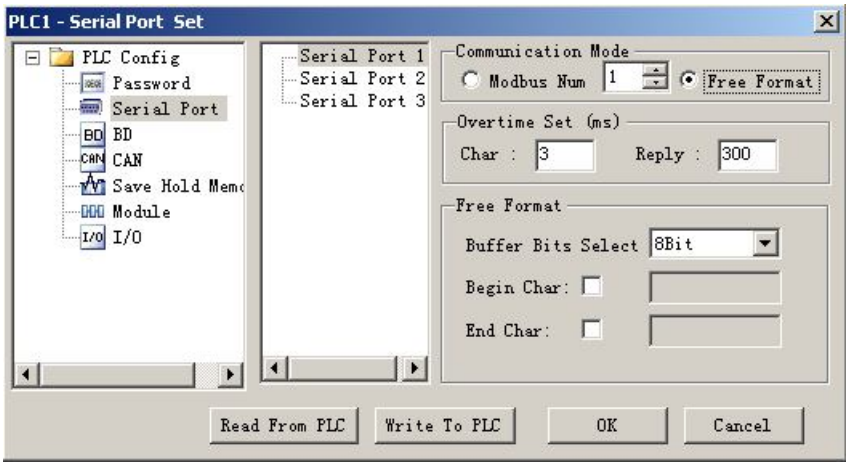
4, Click "Read From PLC" to get PLC default parameter.

5, Click "Write Into PLC" to write current parameters into PLC, then PLC re-power. 。

Modbus communication

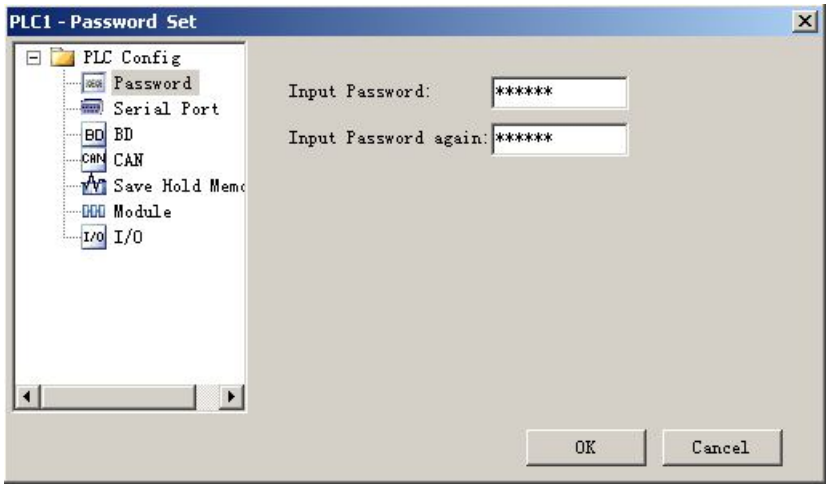


Free protocol communication



5-4-2. Password settings

Click "PLC Config" in project bar→"Password", password set box will pop up for password setting and modification, work together with lock/unlock functions.

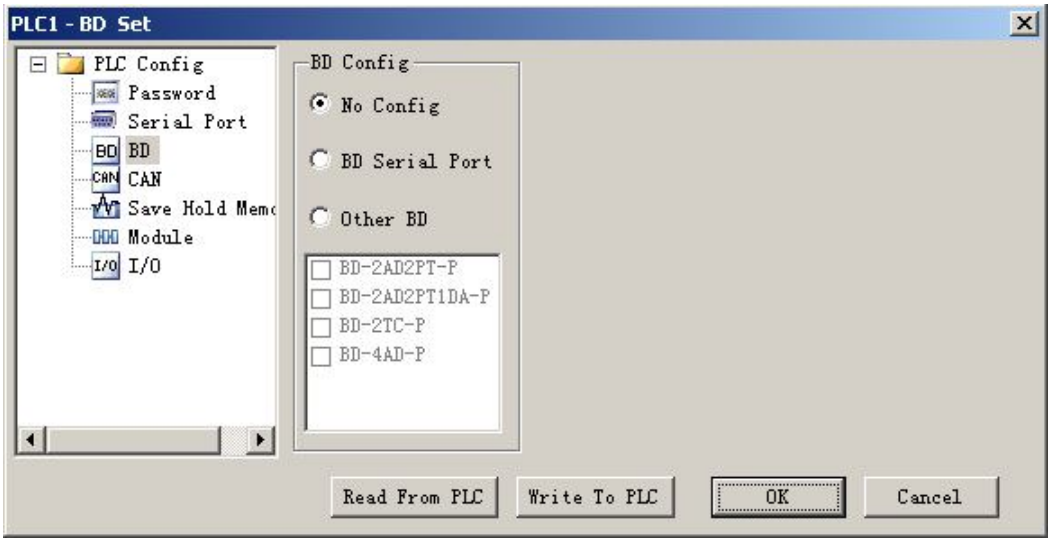


5-4-3. BD board settings

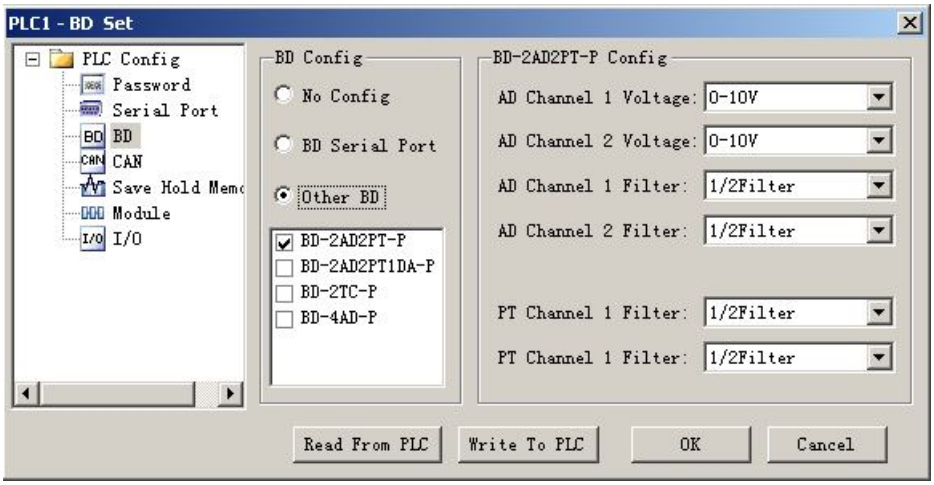
Click "PLC Config" in the project bar→"BD", BD set box will pop up.

- In "BD Config", you can choose "No config", "BD serial port", or "Other BD board".
- Click "Read from PLC" to get default BD config parameter.
- After modifing with BD board parameter, click "Write to PLC" to write set value into PLC.

EX: take "2AD2PT-P" type BD config as example, first pick "other BD" in "BD Config", then choose relevant BD board type in the dialog box.



Click the box before "BD-2AD2PT-P", then "BD-2AD2PT-P config" box will appear in the right. Click drop-down menu to modify its configuration, then click "Write To PLC".



5-4-4. Can-bus communication config

Click "PLC config" in project bar→"CAN", CAN config settings dialog box will pop up.

- Add: first select the configure item, then click "add" button to add address;

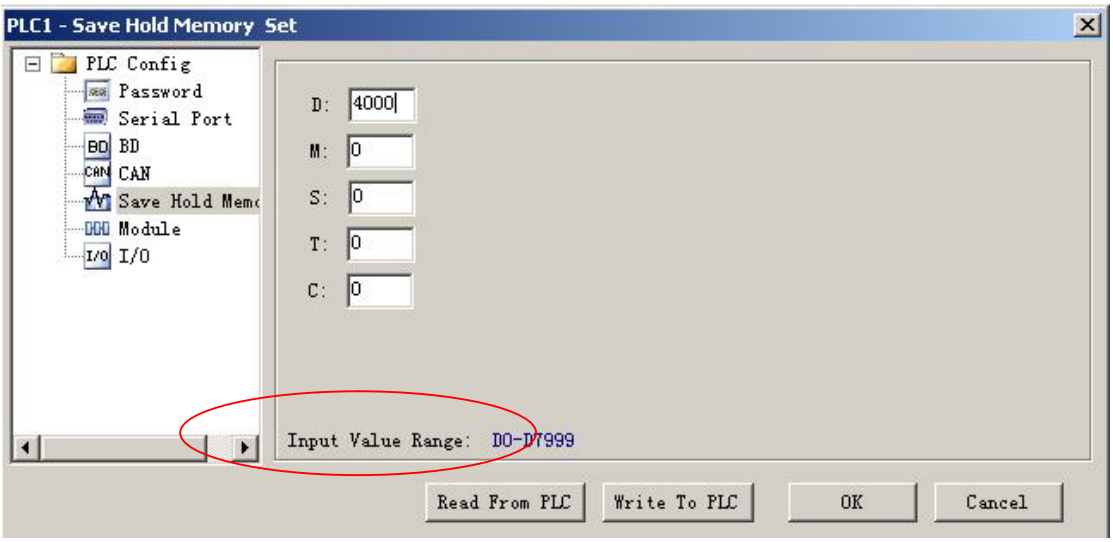
- Delete: select "configed", click "delete" button.

Note: the add and delete of item can also first select operation item, right-click, choose operation in the pop-up menu.

5-4-5. Power-off retentive save memory settings

Click "PLC Setting" in project bar→"Hold Mem Setting", save hold memory set box will pop up.

- The value shown in the right box of each soft element, is the power-off retentive area original address. The "Input Value Range" in the lower left side, show the soft elements effective range.



5-4-6. Expansion module settings

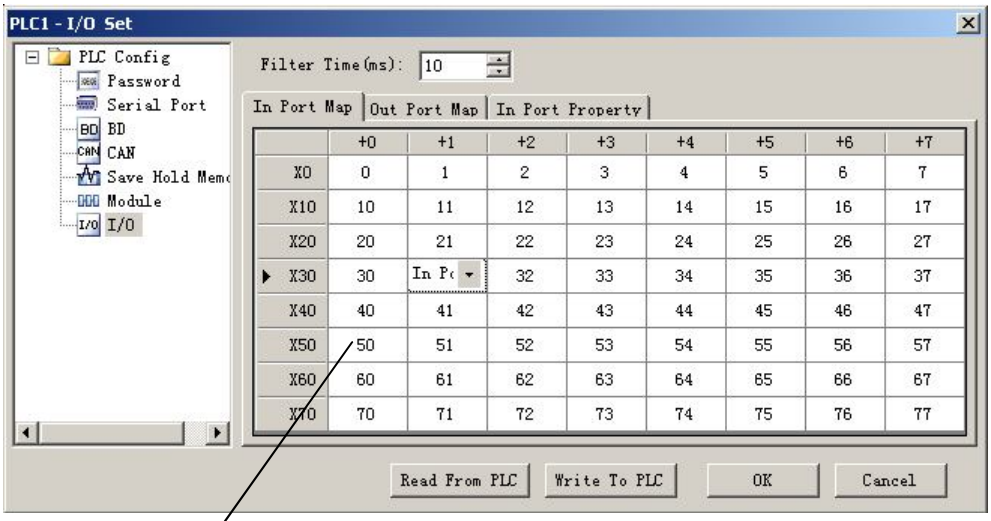
Click "PLC config"→"expansion module", expansion module setting box will pop up.

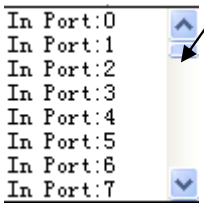
- Click "Read From PLC" to get default configure parameters of expansion module.
- After the settings of expansion module parameters, click "Write To PLC" to write set values into PLC.

5-4-7. I/O settings

Click "PLC config" in project bar→"I/O settings", I/O setting box pop up.

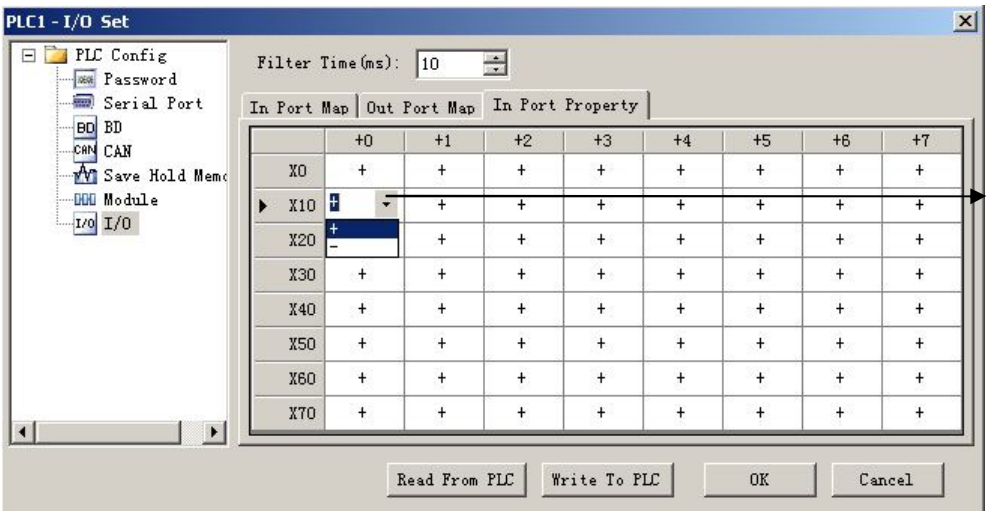
- I/O point mapping: refer to the relevant actual input, output definition of internal soft element number. Such as, set value to be 0 in X0,X1position, then when input terminal is ON, soft element X0,X1 all set ON; if the set value in Y0,Y1 position all are 0, then only while soft element Y1 is ON, output terminal Y0 has export.



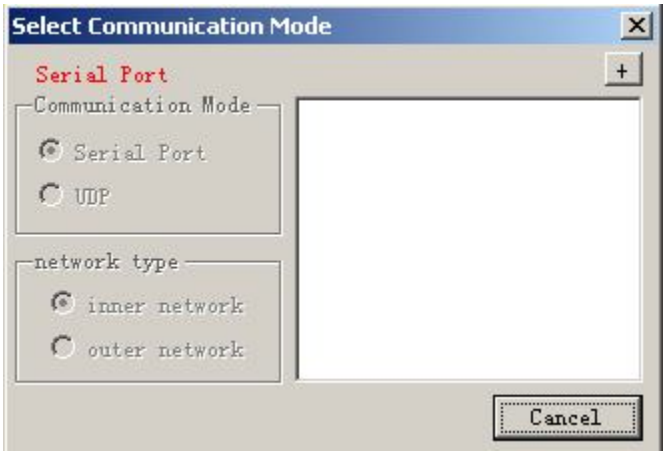


Click E31, pop up drop-down options, as left

- In port property: when it's "+", the input and output state is positive logic; when it's "-", the input and output state will be negative logic.

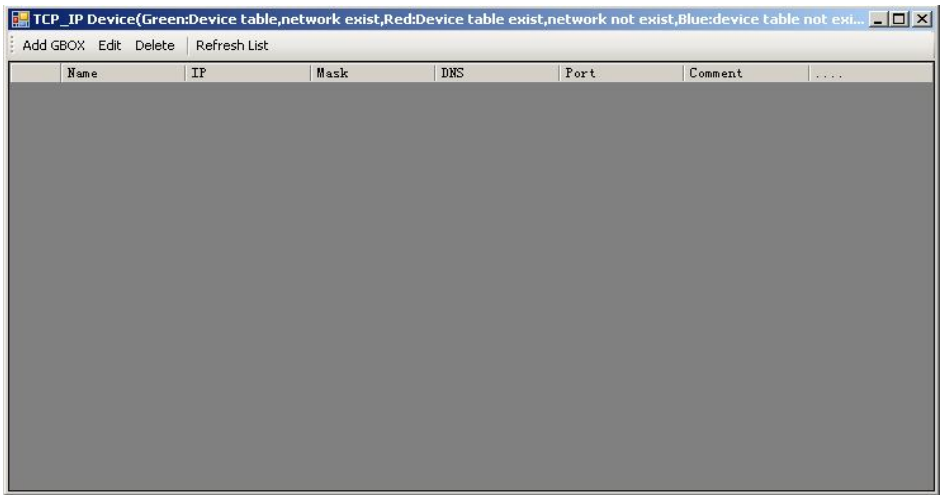

PLC1 - I/O Set
PLC Config
Password
Serial Port
BD
CAN
Save Hold Mem
Module
I/O
Filter Time(ms): 10
In Port Map
Out Port Map
In Port Property
+0 +1 +2 +3 +4 +5 +6 +7
X0 + + + + + + + +
X10 + + + + + + + +
X20 + + + + + + + +
X30 + + + + + + + +
X40 + + + + + + + +
X50 + + + + + + + +
X60 + + + + + + + +
X70 + + + + + + + +
Read From PLC
Write To PLC
OK
Cancel

5-4-8. Communication mode settings

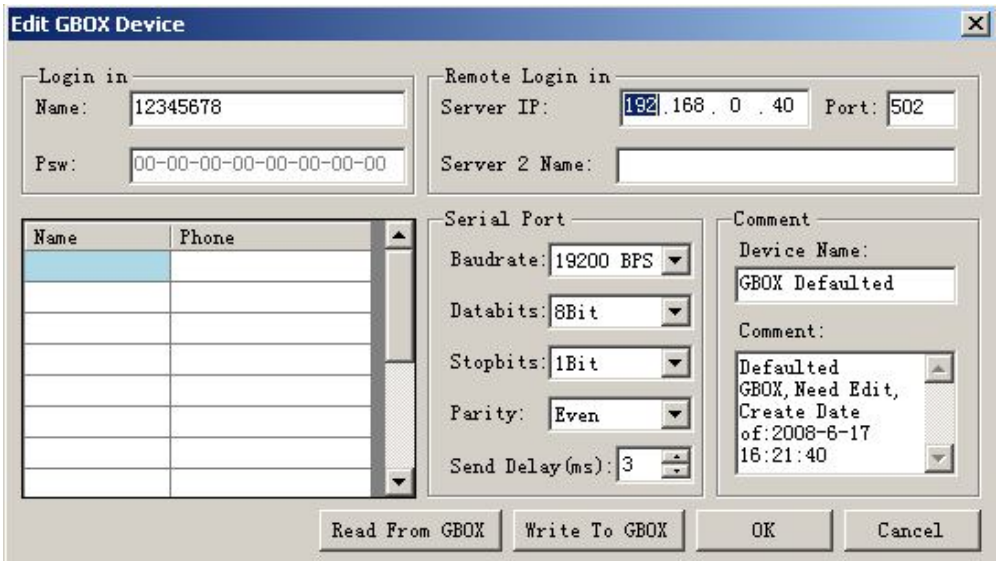


Communication mode settings is usually used to set communication mode of computer and connection device(include main unit PLC, net module).

The default communication mode is serial port, when click "+", it will open TCP/IP device(via .TCP/IP settings) window, as shown below:



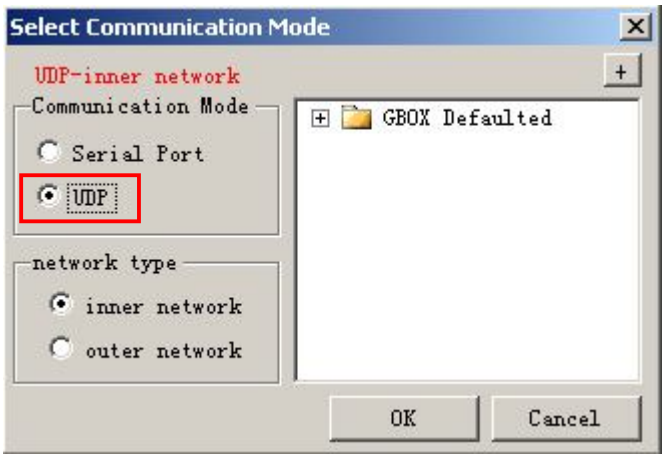
Click "Add GBOX" button, users can add communication device here, window will pop up as follows:



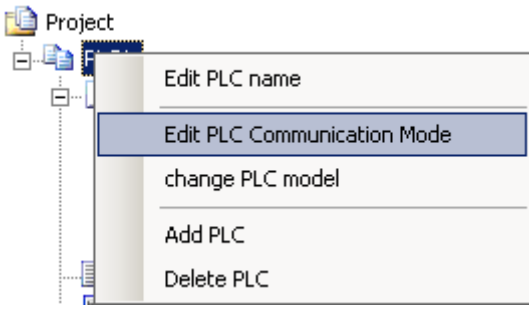
Set relevant parameters in the window, create parameter set, please refer to <<Wireless data transmission

module G-BOX user manual>>, not repeated here.

The communication mode setting interface has changed, item UDP is activated, network type is activated also. Usually G-BOX use internal network type, while T-BOX uses external network type, as shown below:



Communication mode settings can also be done via clicking PLC name in project bar, right click, select "Edit PLC Communication Mode" in pop-up menu, as shown below:

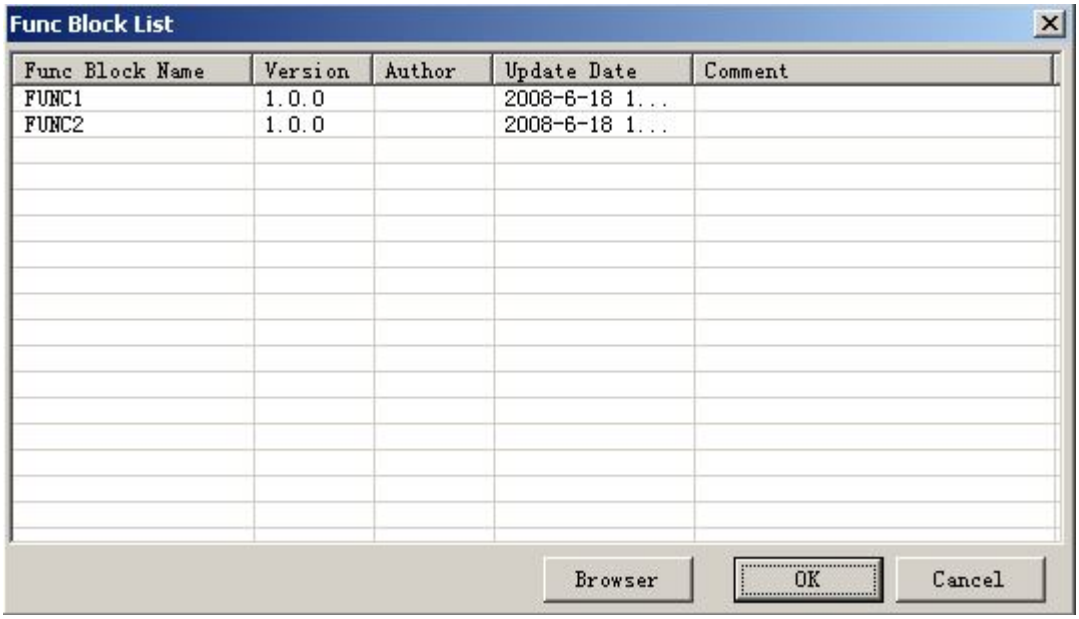


5-4-9. TCP/IP settings

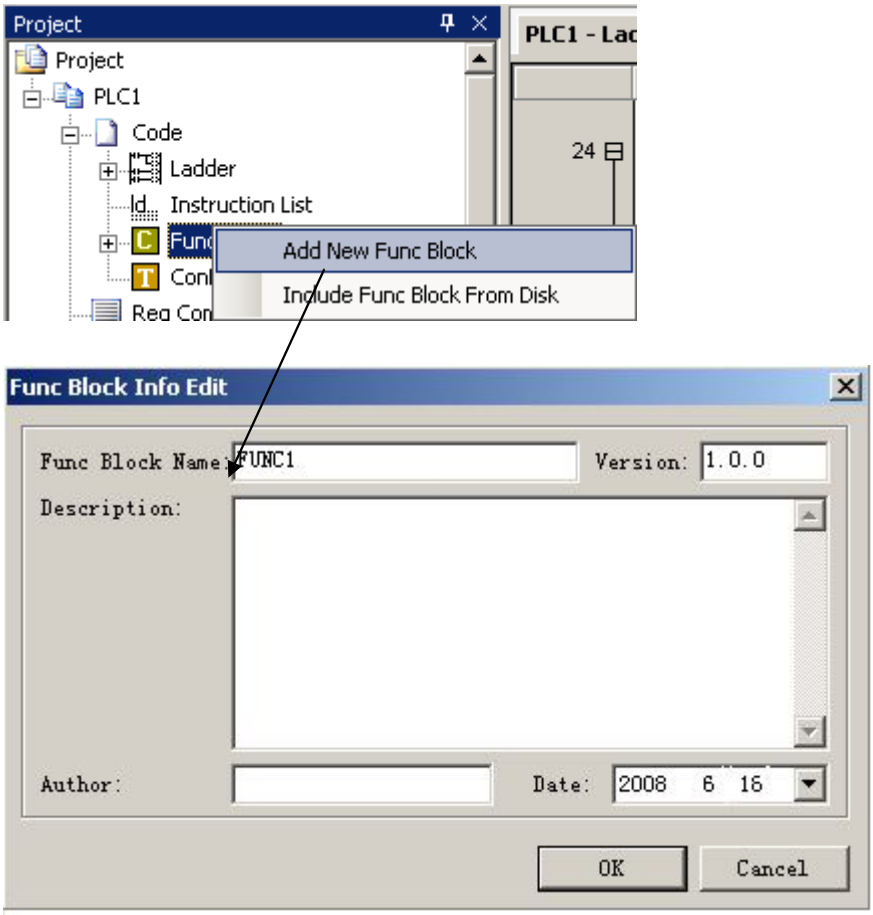
Set window is the same as "TCP/IP device", it can only activate UDP communication after TCP/IP device configured

5-4-10. Function block list

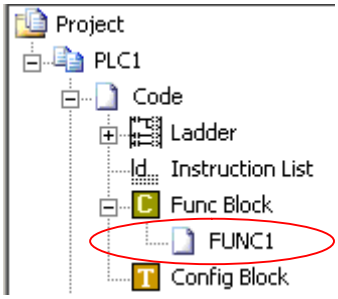
The window is use to show used C language function block and relevant information.



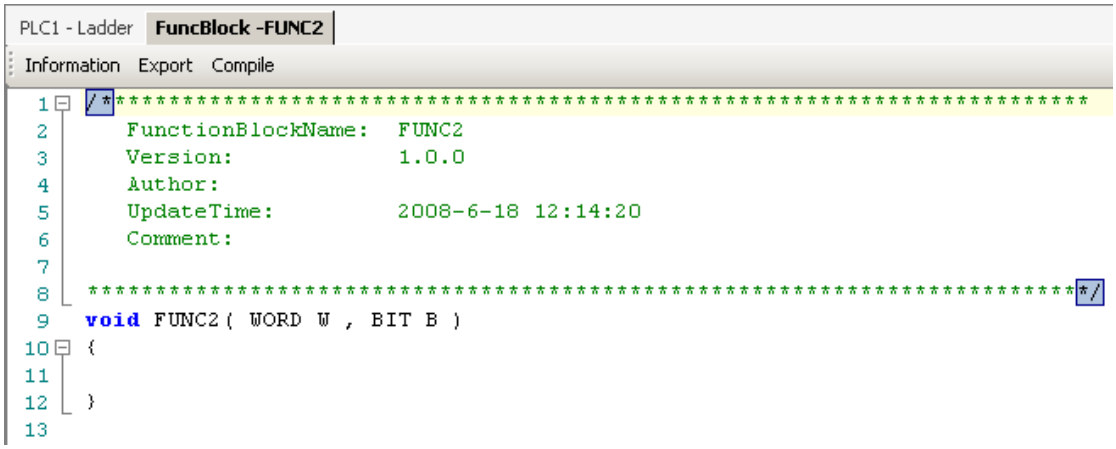
Function block directly compiles in software, it will save as export after completion, and can be directly transferred in ladder chart, shown as below:



After confirming the input function block basic information, you will find a "FUN1" added in the project bar, as shown below:



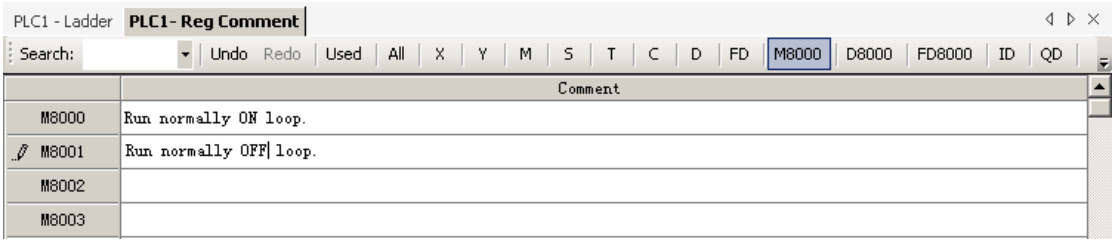
Click "FUN1", the following interface will appear in the main window, users can edit the program here.



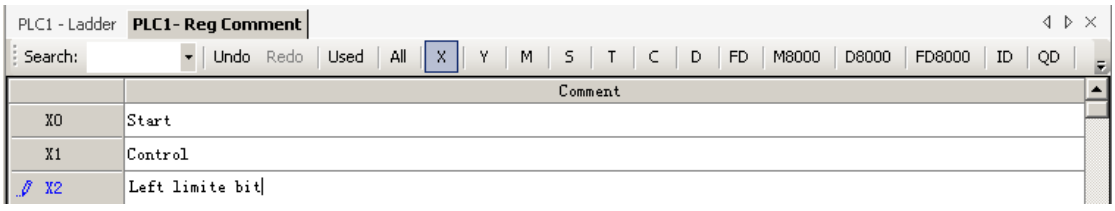
5-5. Soft element monitor

5-5-1. Soft element comment

Click "Reg comment" in project bar, soft element comments window will pop up, you can see all or part of the soft element comment, double-click comment bar will edit the comment.

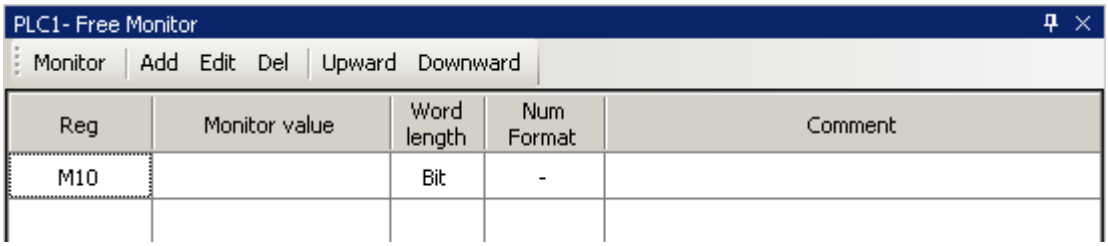


Click "used" in the window, the used soft element window will pop up, and the used element number will be listed respectively.

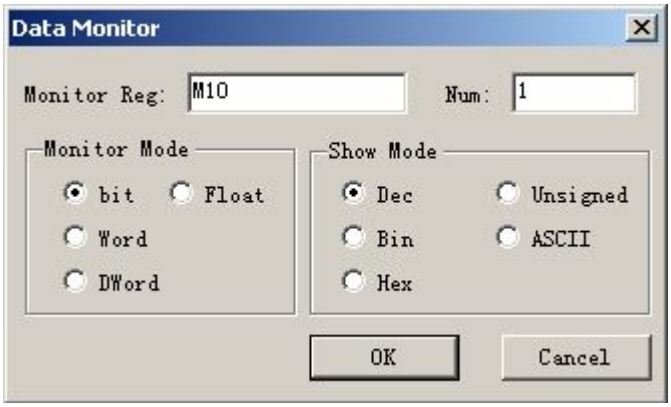


5-5-2. Free monitor

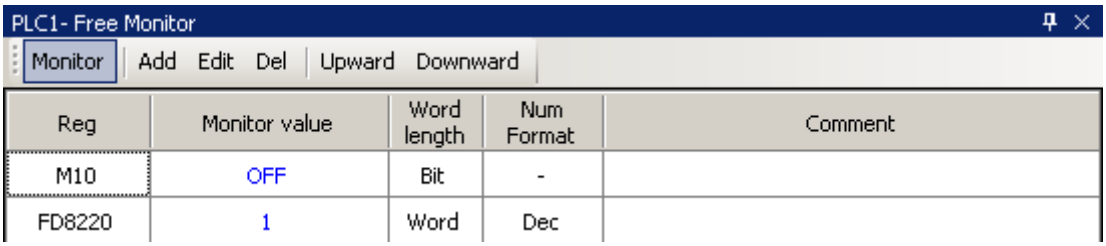
Click "free monitor" in project bar, the free monitor window will pop up.



Click "Add", "monitor node input" window will pop up: input the monitor soft element capital address in "Monitor Reg" bar, set the continuous monitoring soft elements number in "Num", select soft element monitor method in "Monitor Mode" bar, select soft element show mode in "Show Mode" bar.

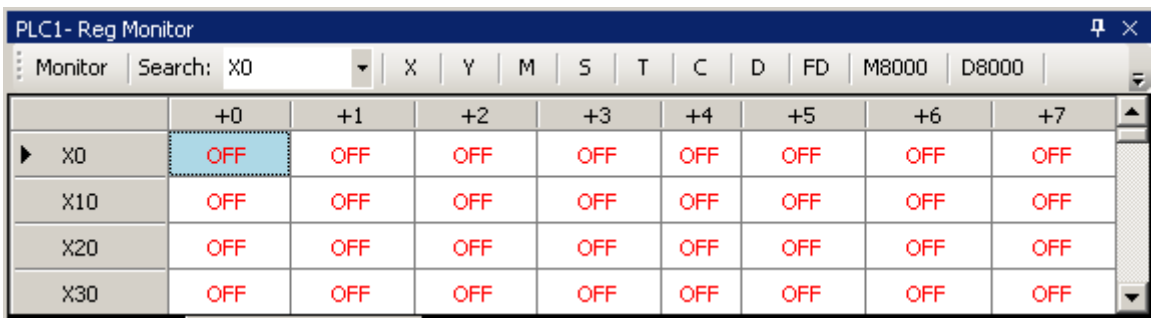


After adding the, serial number, value, word length, number format and comment of relevant element list in monitor window, double-click edit its attribute.

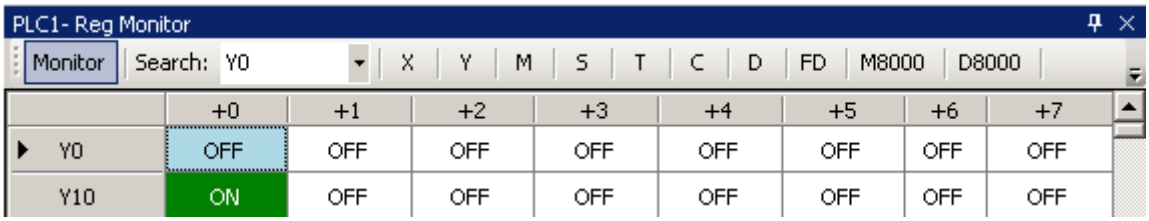


5-5-3. Data monitor

Click "data monitor" in the project bar, the data monitor window will pop up. Data monitoring loop state or data register value in the list or the register value can also be modified and the loop state directly.



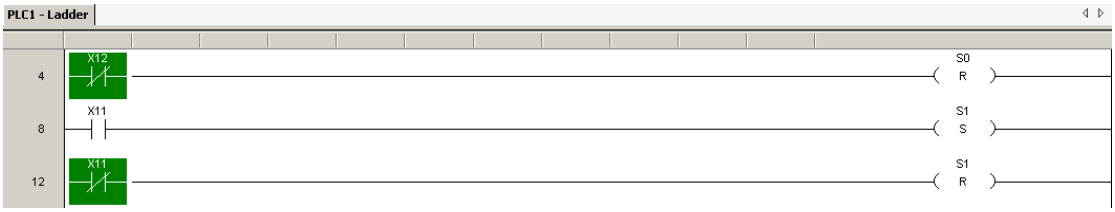
- Mouse double-click loop, then state negation; double-click register, then activate value modification, press enter to confirm input.
- Input relevant soft element number in search bar, press enter, monitor table will automatically jump to relevant place.
- When loop state is OFF, it's blue-background black word; when is ON, it's green-background white word, shown as below:



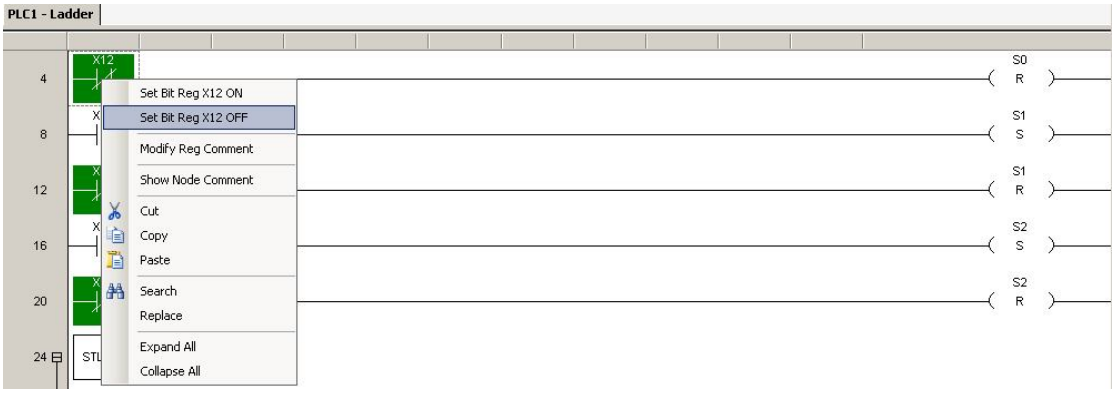
5-5-4. Ladder chart monitor

When PLC connection is successful, and in the run state it is especially usefully for program debugging.

Click " " icon in toolbar, open ladder chart monitor, soft element states of program are shown, loop in green-background white-word is ON state, real-time data in timer, register shows also in ladder chart, shown as follows:



For convenient debugging, users can right-click soft elements, change the current state, and monitor the revised operating results

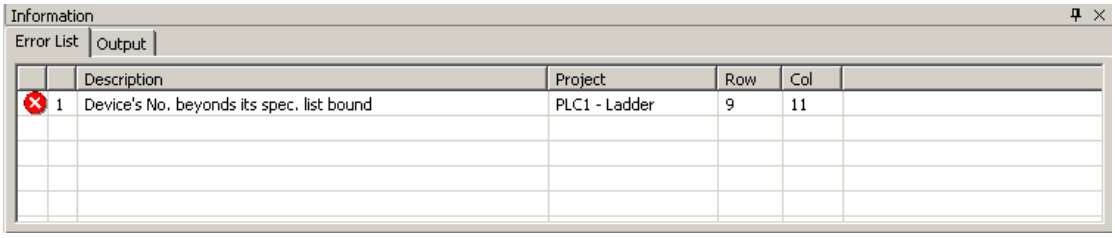


5-5-5. Information bar

Information bar contains "Error information" and "Output".

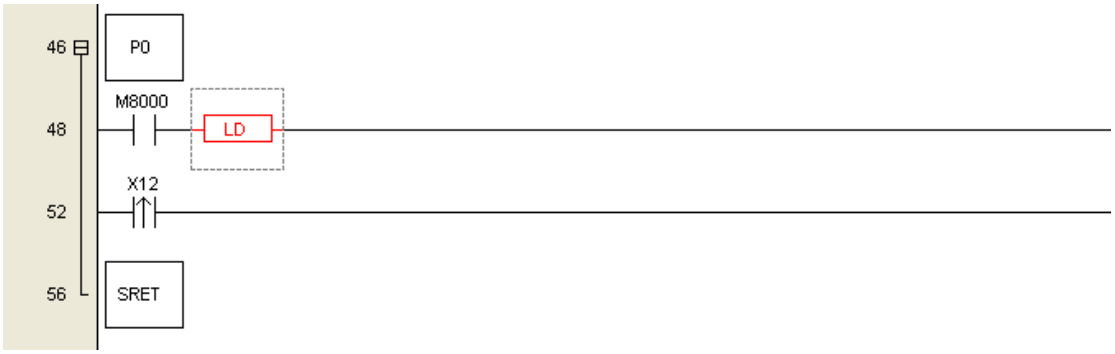
Error information: for showing syntax and run error, generally speaking, when users edit ladder chart, if

sentence error, press enter, it will show in red, and show error in error information list. Shown as follows:

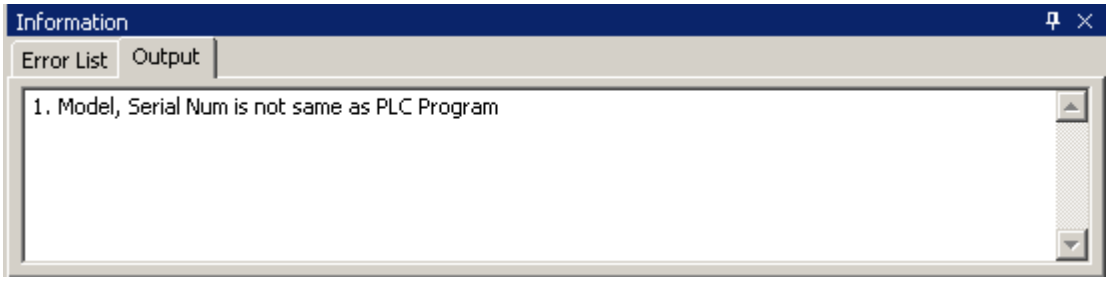


If only checking one sentence, you can click "PLC operate"→"Grammar check".

Double-click error information, then cursor will position to error place automatically, shown as below:



Output: Usually when PLC run is in error, relevant information written into output bar, prompt the operation error. As shown below:



The display of information, data monitor and free monitor can switch via as shown below:

5-5-6. Status bar

The status bar not only shows the relevant information of the current enabled PLC, but users can double-click the status display information, to quickly open the modify attributes window.

Documentation Reference				
Document Number				Revision Date
MANU	L010	R1	V1	01/09/2009
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